DBMaster

DCIBench 快速スタートガイド

P-E9999-DCIBench Qucik Start Guide
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1 DCIBench Overview

DCIBench is a tool that is utilized to create XML files with the expressed purpose of mapping COBOL file fields and DBMaker table columns. With the DCIBench generated XML files DCI can access the DBMaker database using MF COLBOL commands.
DCIBench also provides users with a GUI (Graphical User Interface) to rapidly generate FD and SL data files.
Within the DCIBench environment a code editor is provided to facilitate modifications that might be required to COBOL or XML source code.

1.1 DCIBench: Graphic User Interface

The main application window for DCIBench provides direct access to most of DCIBench's functions. Toolbars, sub windows and other user interface elements can be docked, undocked, hidden, moved or made visible. The settings of DCIBench are retained from session to session.

The Title Bar

The *Title Bar* is located at the top of the screen and displays "DCIBench", and the current name of the project, function, and program. The buttons on the right side of the title bar minimizes or maximizes the window and is used to close a program.

Figure 1-1 Title Bar

The Menu Bar

The *Menu Bar* is located directly below the Title Bar and displays DCIBench's drop-down menus. Each menu contains a list of related commands. Menu commands can be displayed by left clicking with the mouse. The commands can also be accessed by holding down ALT+ (the corresponding underlined letter), then using the arrows keys to navigate up, down, left or right within the Menu Bar. Some menu commands are not active in certain contexts (grayed out) until the corresponding function or screen is used.

Figure 1-2 Menu Bar

The Toolbars

DCIBench's *Toolbars* are located directly below the Menu Bar by default and are palettes of command buttons for commonly used functions. The Standard, Editor, and Launch toolbars can quickly execute commonly used actions. Each of the Toolbars can be displayed, hidden, moved, and resized.
The various Toolbar buttons are enabled when an object with corresponding functions is used. A Toolbar is docked by default when selected, and can be hidden simply by removing it from the desktop. A Toolbar can be moved to a different docked position, or it can be floating; the size of a floating toolbar can also be altered.

DISPLAYING TOOLBARS

Figure 1-3 DCIBench's Toolbars

➲ **To display or hide the various toolbars:**

1. Select **View** from the **Menu Bar**, a drop-down menu appears.
2. Select **Toolbars**, a drop-down submenu appears.
3. Select the desired toolbar(s); the docked toolbar(s) appear(s).

MOVING TOOLBARS

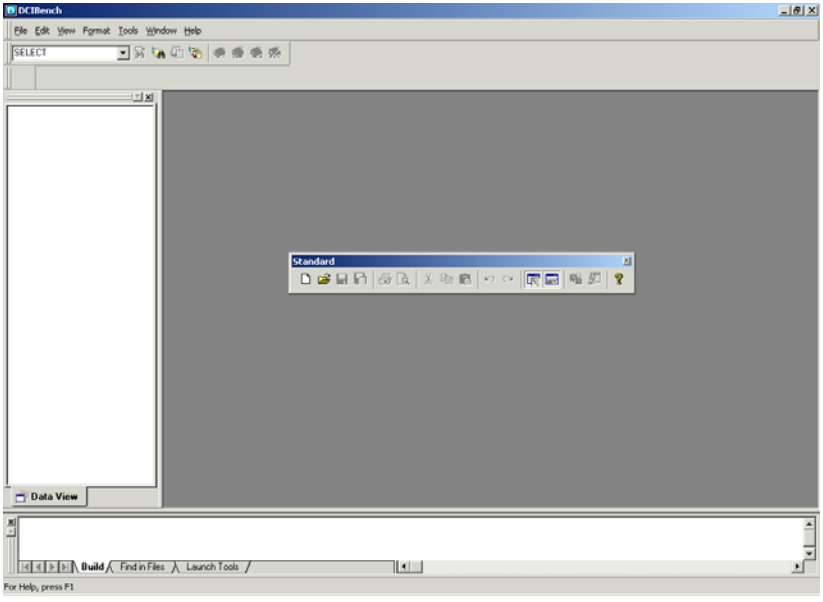


Figure 1-4 A Floating Toolbar

➲ **To move a toolbar:**

1. Place the cursor over the embossed lines on the left side of a toolbar and depress the left mouse button.
2. Drag the toolbar to the desired location and release the mouse button. Dragging it to the **Canvas Area** will create a floating toolbar; dragging it anywhere else, will automatically create a docked toolbar.

RESIZING A TOOLBAR

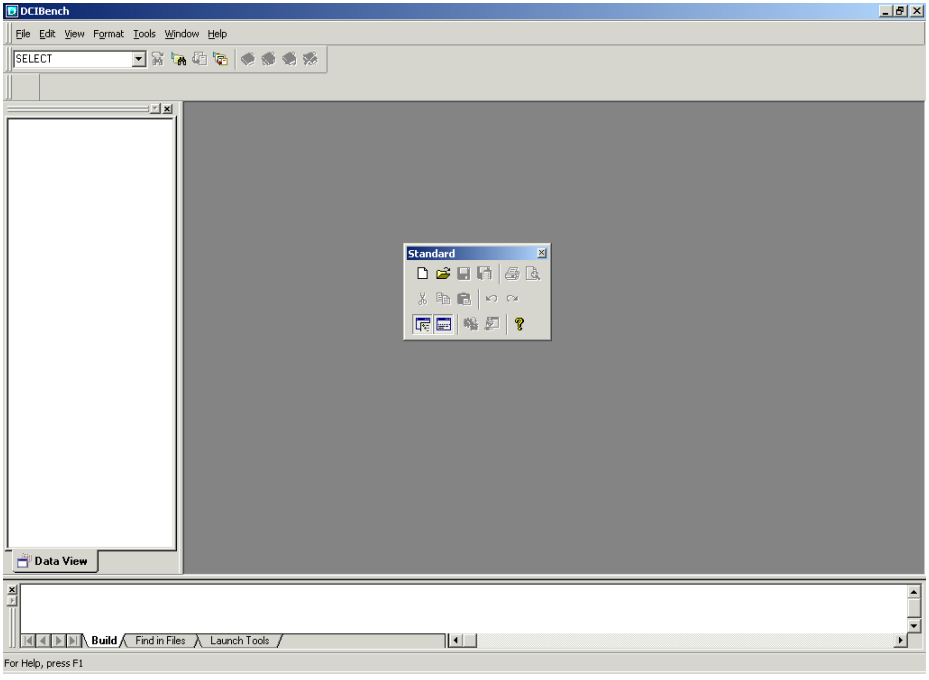


Figure 1-5A Resized Toolbar

➲ **To resize a toolbar:**

1. Move the pointer to the edge of a floating toolbar, the pointer changes to a double-headed arrow.
2. Hold the left mouse button down.
3. Drag the edge of the toolbar inward to make it smaller or drag the edge of the toolbar outward to enlarge it, until it is the desired size.
4. Release the mouse button; the toolbar is resized.

The Project Workspace

The *Project Workspace* is where the most common functions and project management duties are accessed. It is a hierarchical document window providing object-oriented project management and editing functions. It consists the Data view. The Project Workspace opens on the far left of the desktop, just to the left of the Canvas Area.

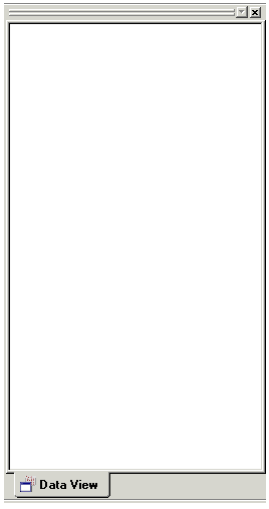


Figure 1-6 The Project Workspace

THE DATA VIEW

The Data View contains a hierarchical view of a project's FD/SL file information. It also provides access to file and project management functions for a project. FD/SL file information is created using the File Designer and are stored in XFDXML layout files ("*".xlt). To open an FD/SL file, in the File Designer, simply double click on the file in the Data View of the Project Workspace.

DOCKING/UNDOCKING A PROJECT WORKSPACE

A Project Workspace is docked on the far left of the desktop, just to the left of the Canvas Area. A Project Workspace can also be an undocked (floating) window.

➲ **To undock a Project Workspace:**

1. Right-click in the **Project Workspace**, a pop-up menu appears.
2. The **Allow Docking** check box is selected by default; remove the check mark to create a floating **Project Workspace**, the **Project Workspace** floats in the middle of the **Canvas Area**.
3. Click and drag the edge of the **Project Workspace** to a desired position while

holding down the mouse button.

4. Release the mouse button and the **Project Workspace** will float in place.

➲ **To re-dock the Project Workspace:**

1. Right-click in the **Project Workspace**, a pop-up menu appears.
2. Check on the Allow Docking check box, the Project Workspace. The Project Workspace is docked.

The Canvas Area

The *Canvas Area* is located in the center of the desktop by default and is where the most common functions and project management duties are performed. The File Designer and the Code Editor occupy the Canvas Area when they are active.

The Output Window

The *Output Window* is where all DCIBench's standard output is displayed. The *Output Window* has three tabbed panes: Build, Find in Files and Launch Tools. The build pane displays messages when FD/SL and XML files are being generated. The Find in Files pane displays output generated form the Find in Files function of DCIBench. The Launch pane displays messages generated from tools launched from DCIBench.

Figure 1-7 Output Window

The Status Bar

The *Status Bar* displays operating messages and hints when for any highlighted menu item. The Code Editor's Status Bar displays Caps Lock mode, Num Lock mode, and Scroll Lock mode indicators. The modes can be toggled "on" or "off" by pressing the appropriate key on the keyboard. No indicator appears in Status Bar for a toggled "off mode". The Status Bar also displays the total number of lines of code, the current column, and line position.

1.2 Customizing the GUI

Many of the attributes and elements of DCIBench's GUI (Graphic User Interface) can be customized to suit user preferences. Options can be set by using various right click pop up menus, the Options dialog box and the Customize dialog box.

Customize Dialog Options

The Customize dialog box is used to set user preferences for DCIBench's toolbars. The Customize dialog box consists of three pages; Toolbars, Commands and, Tools. From the Toolbars page the toolbars for DCIBench can be hidden, made visible, new toolbars can be made or deleted and toolbar settings can be reset to their default values.
From the Commands page customized toolbars can be created according to user preferences.
In the Tools page the user can create new functions or commands for DCIBench's toolbars.

1.3 DCIBench Environment Options

DCIBench's environment options are divided into several categories, which include, General, Template, Build, Keyboard and Prefix options.

General Environment Options

The General environment options for DCIBench allow the user to control:

- the timing of the automatic save function
- the Recently Used Files list
- what the workbench loads when it is first started and when it opens a workspace
- the default source file format
- the translation of ASCII extended characters to Windows ANSI extended characters

➲ **To set General environment options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Environment** icon to expand the **Environment** options list.
4. Select **General** from the **Environment** list. The **General Environment** options appear to the right of the list.
5. Check the **Save option** box to activate automatic saves. The **Automatic save every:_____minutes** text box becomes active.
   a) Enter a new value into the **Automatic save every:_____minutes** text box if the default setting of ten minutes is not suitable
6. If the default values of four in the **Recently used lists** fields are not suitable:
   a) Enter a value between one and eight in the **Recently used files list**.
   b) Enter a value between one and eight in the **Recently used workspaces list**.
7. Select a radio button in the **On start-up** fields to specify what the DCIBench displays or loads when it is first started.
8. Check the **Reloads documents** check box, in the **On open workspace** section, to direct DCIBench to reopen the documents that were open the last time the workspace was open.
9. Specify the default source format type by selecting a radio button in the **Default source format** section.
10. Check the **Translate to ANSI/OEM**, in the **For extended ASCII characters section**, to translate extended ASCII characters that originate in the OEM environment to Windows ANSI extended characters.
11. Click **OK** to save current settings.
12. Click **Save …** to save the current settings to a file that the user can specify.

Template Environment Options

Template environment options allow the user the to set preferences for:

- use or bypassing of the New/File dialog box when creating new FD/SL's or files
- adding or customizing of templates for files

➲ **To set Template environment options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Environment** icon to expand the **Environment** options list.
4. Select **Template** from the **Environment** list. The **Template Environment** options appear to the right of the list.
5. Check the **New File** check box to use the File/New dialog box when creating a new file. If this box is unchecked, by default, a blank file will be created each time the user tries to make a new file.
6. Check the **New FD/SL** check box to use the File/New dialog box when creating a new file. If this box is unchecked, by default, a blank FD/SL will be created each time the user tries to make a new FD/SL.
7. Use the buttons in the **Customize template** area to add, remove, or modify the set of file templates offered in the File/New dialog box.
8. Click **OK** to save current settings.
9. Click **Save …** to save the current settings to a file that the user can specify.

Build Environment Options

Build environment options allow the user to control certain aspects of how DCIBench behaves when running tools or generating FD/SL files.

➲ **To set Build environment options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Environment** icon to expand the **Environment** options list.
4. Select **Build** from the **Environment** list. The **Build Environment** options appear to the right of the list.
5. Check the **Always save all documents** check box to save documents when running tools in DCIBench.
6. Select a radio button in the **When generating the FD/SL files** fields to specify how DCIBench behaves when generating FD/SL files.
7. Click **OK** to save current settings.
8. Click **Save …** to save the current settings to a file that the user can specify.

Keyboard Environment Options

Keyboard environment options allow the user to view, define, redefine, or remove keyboard shortcut keys associated with DCIBench and DCIBench's Code Editor commands.

➲ **To set Keyboard environment options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Environment** icon to expand the **Environment** options list.
4. Select **Keyboard** from the **Environment** list. The **Keyboard Environment** options appear to the right of the list.
5. Select the keyboard shortcut category, to be viewed, defined, redefined, or removed, from the **Category** drop down list.
6. Select the short cut command, to be viewed, defined, redefined, or removed, from the **Command** field. The **Shortcut key** field becomes active.
7. To assign a command:
   a) Enter a command in the **Shortcut key** field.
   b) Click **Assign** to assign a command.
8. Click **Remove** to delete a shortcut key command.
9. Click **OK** to save current settings.
10. Click **Save …** to save the current settings to a file that the user can specify.

Prefix Environment Options

Prefix environment options allow the user to change the default file prefix strings and the default working directory names that are applied when the user creates a new project, FD/SL or file.

➲ **To set Prefix environment options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Environment** icon to expand the **Environment** options list.

4. Select **Prefix** from the **Environment** list. The **Prefix Environment** options appear to the right of the list.
5. Assign the preferred prefix string in the **Project prefix** field for project prefixes.
6. Assign the preferred prefix strings in the **FD/SL prefix** field for FD/SL prefixes.
7. Assign the preferred prefix strings in the **File prefix** field for file prefixes.
8. Enter the preferred name in the **XML directory** field for the XML directory name.
9. Enter the preferred name in the **FD directory** field for the FD/SL directory name.
10. Click **OK** to save current settings.
11. Click **Save …** to save the current settings to a file that the user can specify.

1.4 Code Editor Options

Code Editor options for DCIBench are broken up into four categories: General, Format, Tabs and Keyword.

General Code Editor Options

The General Code Editor options that can be set by the user include:

- modifying the width of the Line Number pane
- modifying the length of a line in the Code Editor
- setting the delimiter options for saving in a Windows or Unix environment
- setting the vertical block behavior

➲ **To set General Code Editor options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Code Editor** icon to expand the **Code Editor** options list.
4. Select **General** from the **Code Editor** list. The **General Code Editor** options

appear to the right of the list.

5. Enter a value in the **Line number pane width** field if the default value of five is unsuitable.

6. Enter a value in the **Line length** field if the default value of 318 is unsuitable.

7. Set end of line options:

   a) Select the **Save Record Delimiter as CR/LF** radio button if saving in a Windows environment.

   b) Select the **Save Record Delimiter as LF** radio button if saving in a UNIX environment.

8. Set the **Virtual Space** check box for an unlimited vertical block select. Clear the **Virtual Space** check box if the vertical block select function to is be limited to the width of the last line of the text block.

NOTE *Users make a block selection by holding down the ALT key and left click the mouse and the select the block of text to be edited or acted upon.*

9. Click **OK** to save current settings.

10. Click **Save …** to save the current settings to a file that the user can specify.

Format Code Editor Options

Format Code Editor options allow the user to set options for:

- setting the source file format
- modifying the source file code
- modifying the colour that identify each ANSI display field
- customizing the text apperance of code types
- designating the text string that is inserted in ANSI format when modifying source code

➲ **To set Format Code Editor options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.

2. Select **Options** from the drop down list. The **Options** dialog box appears.

3. Click the [+] **Code Editor** icon to expand the **Code Editor** options list.

4. Select **Format** from the **Code Editor** list. The **Format Code Editor** options

appear to the right of the list.

5. Select the source format in the **Source format** drop down list.
6. Check the **Modify Code** check box if the user wants to insert a specified character string in ANSI format columns 73-80 when a line of code is added or modified. Enter the desired string to be inserted in the adjacent entry field.
7. Set the **Format** and **Highlight** settings by choosing a format from the list, select columns to be effected and the desired background and foreground colours. Clear the **Enable "Format" and "Highlight" settings** check box to disable these settings.
8. Click the **Font …** button to select a different font setting. The **Font** dialog box appears.
9. Set the **Font**, **Font style** and **Size** settings and click **OK**. The **Options** dialog box appears.
10. Click **OK** to save current settings.
11. Click **Save …** to save the current settings to a file that the user can specify.

Tabs Code Editor Options

Tabs Code Editor options allow the user to control support of the tabs in source code or automatically convert tabs in code to spaces.

➲ **To set Tabs Code Editor options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Code Editor** icon to expand the **Code Editor** options list.
4. Select **General** from the **Code Editor** list. The **General Code Editor** options appear to the right of the list.
5. Check the **Display Tab character with** check box to display a special character to indicate the location of a tab in the code. Insert a non-blank character in the accompanying entry field.
6. Enter a value in the **Tab size** field if the default value of four is unsuitable.
7. Select a source format from the **Source format** drop down list. Different sets of tab stops can be set for each source format.
8. Set the **Keep Tabs** radio button if the Code Editor is to support the insertion

of tabs using the default tab size.

9. Set the **Insert spaces** radio button if the Code Editor is to support the conversion of tabs to spaces or to set individual tab stops in the code.
10. To add tab stops, enter each desired setting in the **Tabs** field and click **Add**.
11. Click **OK** to save current settings.
12. Click **Save …** to save the current settings to a file that the user can specify.

Keyword Code Editor Options

Keyword Code Editor options allow the user to add, delete, and modify keyword sets. Several default keyword sets are listed in the Keyword Set drop-down list. The user can also associate an indent value with a keyword and set an auto-indent behavior. The indent value is applied to the line following the keyword.

➲ **To set Keyword Code Editor options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.
2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Code Editor** icon to expand the **Code Editor** options list.
4. Select **Keyword** from the **Code Editor** list. The **Keyword Code Editor** options appear to the right of the list.
5. Click the **Add…** button to add a keyword set. The **Add Keyword Set** dialog box appears.
   a) Enter the keyword set name in the **Keyword Set Name** field.
   b) Specify the if the keyword set is copied from an existing internal or external keyword set by setting on of the radio buttons in the **Copy From** section of the dialog box.
   c) Click **OK**. The **Options** page appears.
6. Click the New (Ins) button to add a keyword to a keyword set.
7. Modify a keyword or it's indent value by selecting the approriate field and entering a new value.
8. Set automatic indent functions by setting one of the radio buttons in the **Auto indent** section of the dilaog box.
9. Click **OK** to save current settings.

10. Click **Save …** to save the current settings to a file that the user can specify.

1.5 Data Designer Options

Data Designer options allow the user to set

- colours for copy files
- element prefixes
- elementary level settings for data items

General Data Designer Options

General Data Designer options allow the user to select the colours used to display linked items (items brought in via a COPY statement) included with the data designers.

➲ **To set General data designer options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.

2. Select **Options** from the drop down list. The **Options** dialog box appears.

3. Click the [+] **Data Designer** icon to expand the **Data Designer** options list.

4. Select **General** from the **Data Designer** list. The **General Data Designer** options appear to the right of the list.

5. Select the colours used to display linked items from the **Text Color** drop down fields.

6. Click **OK** to save current settings.

7. Click **Save …** to save the current settings to a file that the user can specify.

Graphical FD Data Designer Options

Graphical FD Data Designer options allow the user to set the element prefix and the level-number interval settings for data items.

➲ **To set Graphical FD data designer options:**

1. Click **Menu** in the **Menu** bar. A drop down list appears.

2. Select **Options** from the drop down list. The **Options** dialog box appears.
3. Click the [+] **Data Designer** icon to expand the **Data Designer** options list.
4. Select **Graphical FD** from the **Data Designer** list. The **Graphical FD Data Designer** options appear to the right of the list.
5. Enter a prefix string in the **Element Prefix** field.
6. Set the elementary level settings in the **Elementary Level Settings** section of the dialog box.
7. Click **OK** to save current settings.
8. Click **Save …** to save the current settings to a file that the user can specify.

2 Working with Projects

This chapter of the user's guide will address how a user will create, delete, modify and manage projects and their associated files.

2.1 Project Management

Creating a project is the first step in developing XML files in DCIBench. The most common functions and project management duties can be performed with pop-up menus in the Project Workspace.
When the first project is created, a corresponding Project Workspace is automatically created. When creating subsequent projects, a choice of having it created in the same Project Workspace or creating a new Project Workspace can be made. An unlimited number of projects may be contained in each Project Workspace and each project can contain an unlimited number of data files. DCIBench's Project Wizard can also be used to quickly create projects.

2.2 The Project Workspace

The **Project Workspace** is a hierarchical document window that provides object-oriented project management and editing functions. It consists of the **Data View**. The **Project Workspace** opens on the far left of the desktop, just to the left of the **Canvas Area**, displaying **Data View**. It can be displayed, hidden, resized, and moved

to a different location on the desktop.

NOTE *Use the mouse to right-click icons in order to display pop-up menus, which can be used to perform common tasks more quickly.*

2.3 Creating a Project Workspace

Workspaces are indirectly created when a project is created. To create a workspace you must create a project. The following conditions determine when a new workspace is created:

- When a user creates a new project and no workspace is open, a workspace will be created by DCIBench. The new workspace will have the same name as the new project.
- When a user creates a new project and a workspace is already open, the user will have the option of adding the new project to the active workspace or creating the project ina new workspace.

When a new workspace is created, it is automatically assigned the same name as the project that created it.

Opening a Project Workspace

A Project's contents are displayed in the **Project Workspace** area after selecting and opening a Project.

➲ **To open the Project Workspace:**

1. Select **File** from the **Menu Bar**. A drop-down menu appears.

TIP To open a recent **Project Workspace**, select **File** from the **Menu Bar**, a drop-down menu appears. Select **Open Recent Workspace**, a sub-menu appears displaying the recently opened **Project Workspace**(s). Select the desired **Project Workspace** and go to step 5.

2. Select **Open Workspace**, the **Open Workspace** dialog box appears, displaying the last **Project Workspace** opened in the directory window and the file type in the **Files of Type** drop-down list box.
3. In the **Look in** drop-down list box, select a drive and directory path where the desired project is located.
4. Click **Open**.

5. The **Project Workspace** opens on the far left of the desktop, just to the left of the **Canvas Area**.

2.4 Creating Projects

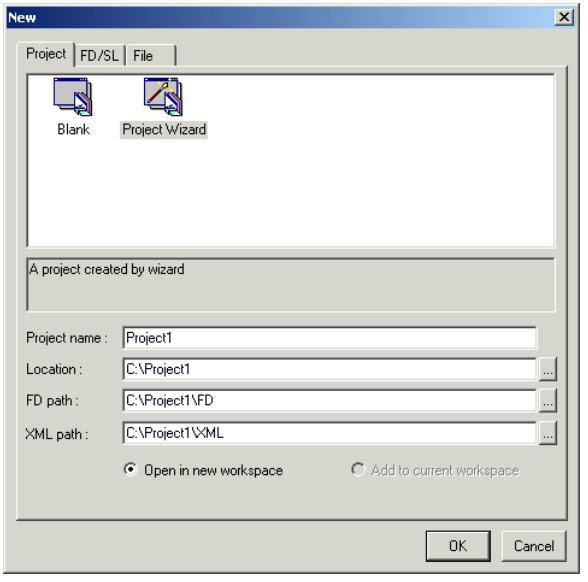
A project consists of one or more FD/SL files and its related XML file. Projects can be created using the project wizard or the user can create a blank project.
The user can create a blank project from which the user can then add FD/SL files as the user sees fit. The user can also use the project wizard to generate projects. Using the project wizard the user is able to rapidly generate a project and import existing FD/SL files from a database or from files.

Creating a Blank Project

A blank project consists of the project file only. The user will be required to add other files to the project.

➲ **To create a project:**

1. Select **File** from the **Menu Bar**. A drop-down menu appears.
2. Select **New** from the drop down menu. The **New** dialog box appears. The **Project** portion of the dialog box is displayed by default.



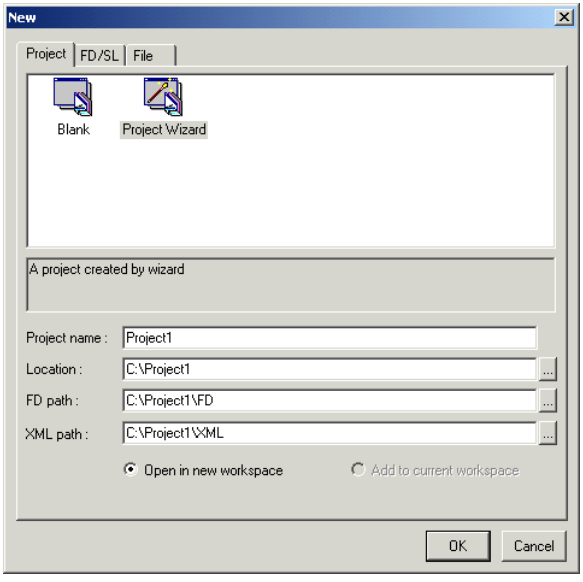
3. Select the **Blank** icon.
4. Enter a project name in the **Project name** field.
5. Enter the project's location in the **Project name** field.
6. Enter a location for the project in the **Location** field.
7. Enter a location for the FD files in the **FD path** field.
8. Enter a location for the XML files in the **XML path** field.

Creating a Project with the Project Wizard

The Project Wizard is used to select and import existing FD/SL files into a project, by using a systematic process, to guide a user to rapidly generate projects.

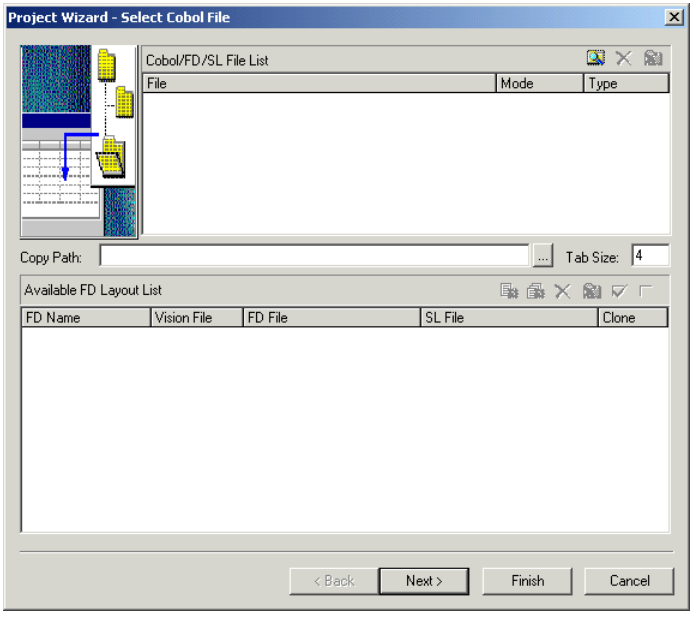
➲ **To create a project:**

1. Select **File** from the **Menu Bar**. A drop-down menu appears.
2. Select **New** from the drop down menu. The **New** dialog box appears. The **Project** portion of the dialog box is displayed by default.



3. Select the **Project Wizard** icon.
4. Enter a project name in the **Project name** field.
5. Enter the project's location in the **Project name** field.
6. Enter a location for the project in the **Location** field.
7. Enter a location for the FD files in the **FD path** field.
8. Enter a location for the XML files in the **XML path** field.
9. Select the **Project Wizard** icon. The **Project Wizard – Select Cobol File** dialog box appears.

SELECTING COBOL FILES



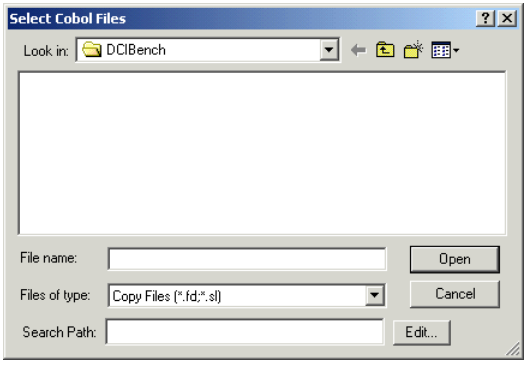
- The **Cobol/FD/SL File List** lists all the files, and their paths, that have been imported in the project.
- The **Browse** button opens the **Select Cobol Files** dialog box.
- The **Remove Files** button in the **Cobol/FD/SL File List** portion of the dialog box allows a user to remove selected files from the **Cobol/FD/SL File List**.
- The **Clear** button removes all files from the **Cobol/FD/SL File List**.
- The **Mode** field shows the data type of the imported files. By double clicking the **Mode** field of a selected file a combo box appears. The combo box allows a user to select the data type of the file (ANSI or Terminal). By default this combo box is set to **Auto**, so DCIBench automatically detects the file type for the user.
- The **Type** field allows a user to select the type of COBOL file that is being imported. By double clicking the **Type** field of a selected file a combo box appears. The combo box allows a user to select the type of COBOL file that is being imported (FD or SL). By default this combo box is set to **Auto** so

DCIBench automatically detects the type of file for the user.

- The **Copy Path** field indicates the location of the COPY file of the selcted COBOL/FD/SL file.
- The **Tab Size** field indicates if a file has a "/t" character in it the specified tab size will be used.
- The **Associate All**  button parses and associates all the FD and SL files in the **Cobol/FD/SL File List**.
- The **Associate Selected**  button parses and associates selected FD and SL files in the **Cobol/FD/SL File List**.
- The **Available FD Layout List** displays the FD files that have been successfully parsed and associated.
- The **Delete**  button in the **Available FD Layout List** portion of the dialog box allows a user to remove selected files from the **Available FD Layout List**.
- The **Delete All**  button removes all files from the **Available FD Layout List**.
- The **Check All**  button removes all files from the **Available FD Layout List**.
- The **Uncheck All**  button removes all files from the **Available FD Layout List**.

➲ **To add COBOL file to a project:**

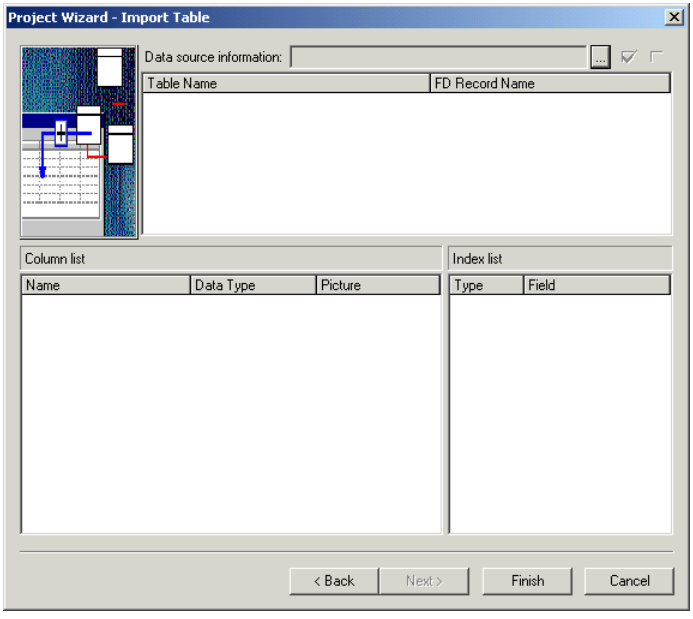
1. Click the **Browse**  button. The **Select Cobol Files** dialog box appears.



2. Enter a file name in the **File name** field.
3. Select the type of files to be imported from the **Files of type** combo box.
4. Designate a search path for the project in the **Search Path** field if the selected COPY file includes other COPY files.
5. Click **Open**. The selected file(s) appear in the **Cobol/FD/SL File List**.
6. Click the **Associate All** button. The parsed and associated files appear in the **Available FD Layout List**.
7. Click the **Check All** button so that all the files in **the Available FD Layout List** will be imported into the project.
8. Click the **Next** button. The **Project Wizard – Import Table** dialog box appears.

SELECTING TABLES

The **Project Wizard – Import Table** dialog box allows a user to import files or tables from existing databases.



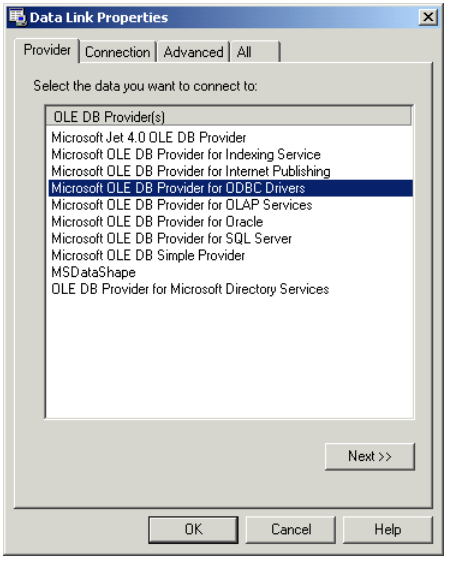
- The **Data source information** field indicates where the database is located.
- The **Browse** button opens the **Data Link Properties** dialog box.
- Clicking the **Check All** button selects all tables being imported to the project.
- Clicking the **Uncheck All** button unselects all tables being imported to the project.
- The **Table Name** field shows the name of the table being imported.
- The **FD Record Name** field shows the corresponding FD name of the selected table. The user can change the FD record file name for a table by double clicking this field for the selected table and entering and new record file name.
- The **Name** field in the **Column List** shows the column names for the selected table being imported.
- The **Data Type** field in the **Column List** shows the data type for the column.
- The **Picture** field in the **Column List** allows the user to change the corresponding picture of the FD data item. The user can change the picture for

an FD data item by double clicking this field for the selected column and entering a suitable value.

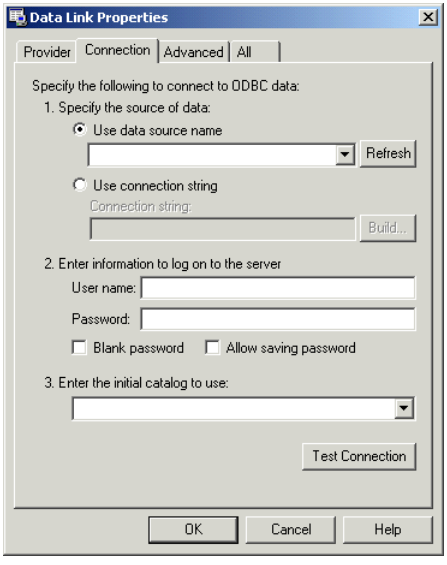
- The **Type** field in the **Index List** shows the keys and indexes on a table being imported.
- The **Field** field in the **Index List** shows the table field being acted upon by a key or an index.

➲ **To add a table from an existing database:**

1. Click the **Browse** button. The **Data Link Properties** dialog box appears.

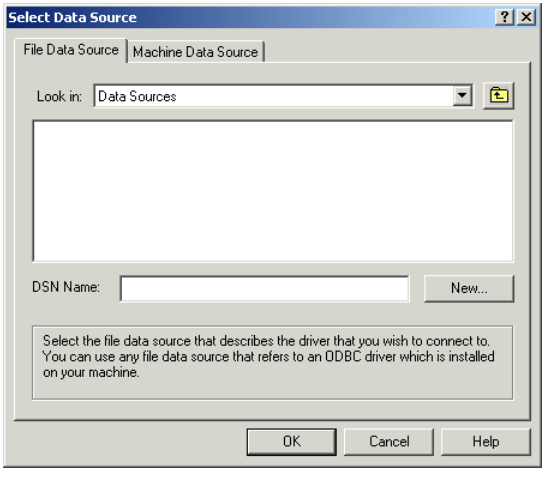


2. Select the data link from the **Provider** tab.
3. Click **Next**. The **Connection** tab appears. To specify the data source from the **Data Source** combo box go to step 4. To specify the data source from the **Connection String** field go to step 6.



4. Select a data source from the **Data Source** combo box. Continue to step 7.

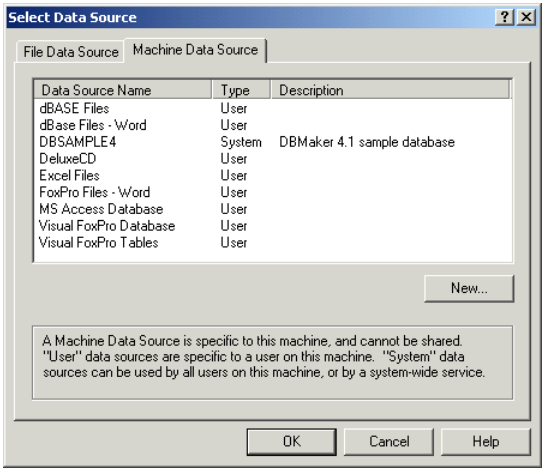
5. Click the **Build** button. The **Select Data Source** dialog box appears.



a) Specify the data source location in the **Look In** combo box.

b) Enter a DSN (Data Source Name) in the **DSN Name** field.

c) Click the **Machine Data Source** tab. The **Machine Data Source** dialog box appears.



d) Select the data source from the **Data Source Name** list.

e) Click **OK**. The **Connection** dialog box appears.

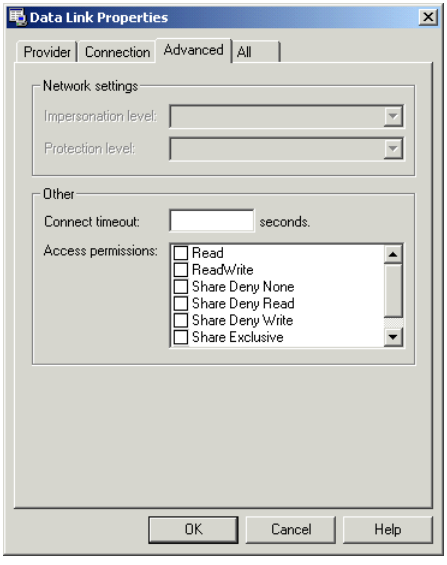
6. Enter a username for the database in the **User name** field.

7. Enter the password for the database in the **Password** field.

8. Check the **Blank password** check box to allow a blank password for connection to the database.

9. Check the **Allow saving password** to allow passwords to be saved when connecting to the database.

10. Click the **Advanced** tab. The **Advanced** dialog box appears.

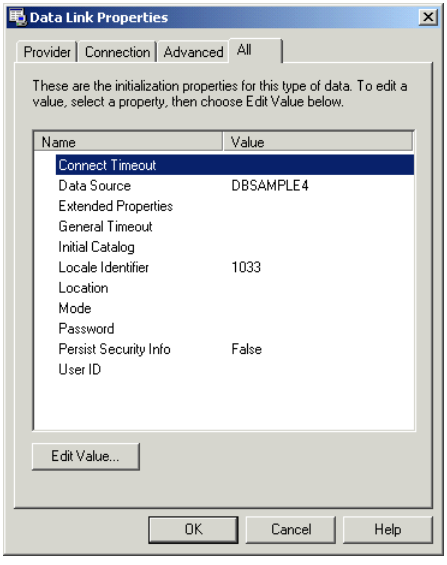


11. Set the network settings in the **Network Settings** portion of the dialog box.

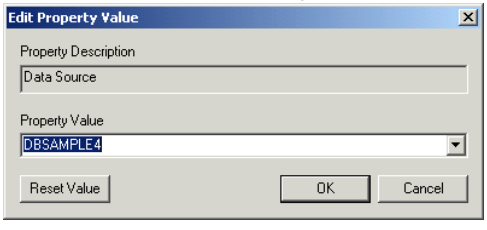
12. Set the connection time out limit in the **Connect timeout** field.

13. Set the file access permissions in the **Access permissions** field.

14. Click the **All** tab. The **All** dialog box appears.



15. The initialization properties for the data are shown. To edit a value select the initialization property to be edited and click the **Edit Value** button. The **Edit Property Value** dialog box appears.



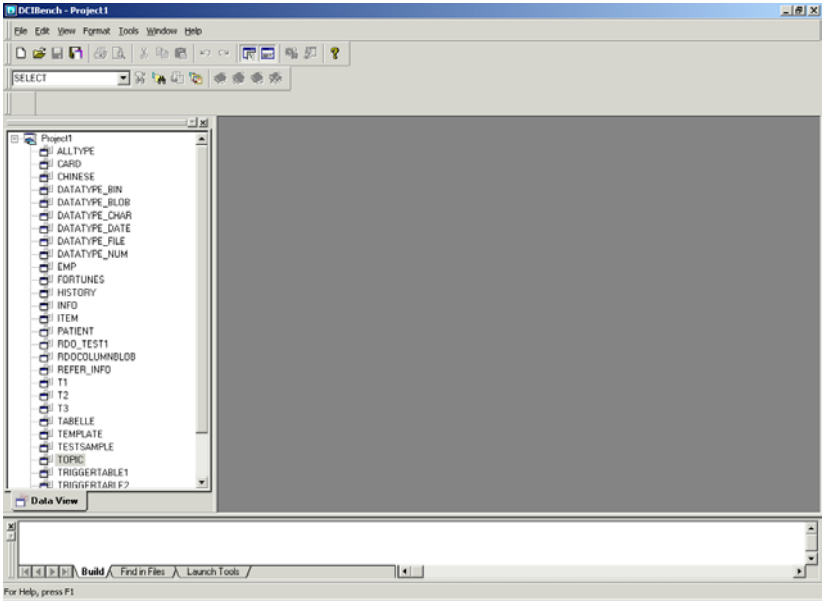
16. Enter the required value in the **Property Value** field.

17. Click **OK**. The **All** dialog box appears.

18. Click **Ok**. The **Project Wizard – Import Table** dialog box appears.

19. Check the tables that are required for the project in the **Table Names** field.

20. Click **Finish**. The new project appears in the **Data View** of the **Project Workspace**.



Project Properties

Once a project has been created, using a blank project or the project wizard, the user can check the properties for the project.

➲ **To check project properties:**

1. Right click the project folder in the project workspace. A pop up list appears.
2. Select **Properties…** from the pop up list. The **Project Properties** dialog box appears.
3. Enter a project name in the **Project Name** field if the project name is unsuitable.
4. Enter a copy file path in the **Copy Path** field.
5. Click **OK** to save the desired settings.

Deleting a Project

Deleting a project removes the project file and all associated files, such as the FD/SL

and XML files from DCIBench.

➲ **To delete a project:**

1. Right click the project folder in the project workspace. A pop up list appears.
2. Select **Delete** from the pop up list. The warning dialog appears asking if the user wants to remove the project from DCIBench.
3. Click **Yes** to remove the project from DCIBench. The project is deleted from the workspace.

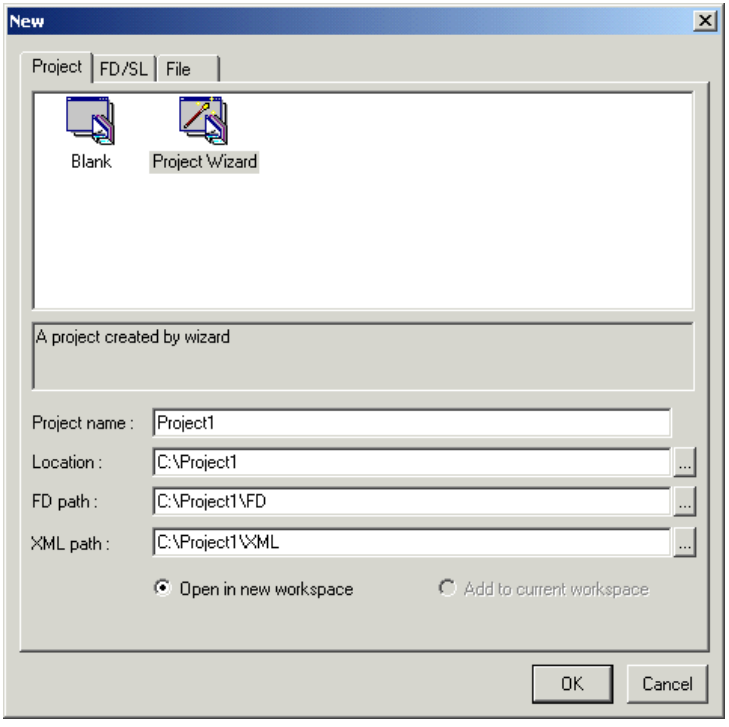
2.5 File Descriptors

Once a project has been created the user will now need to flesh out the project with file descriptors.

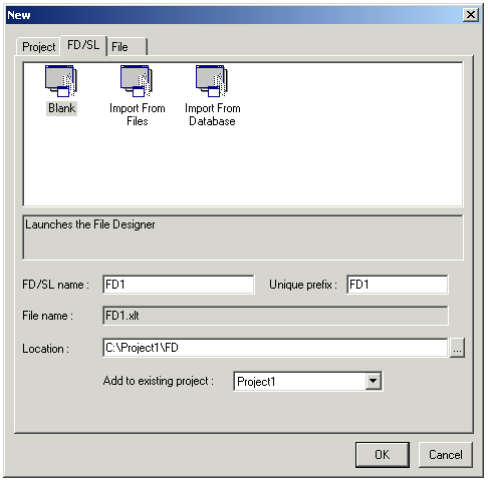
➲ **To create a new FD/SL file:**

1. Select **File** from the **Menu Bar**. Or right click the project icon in the project workspace. A drop-down menu appears.

2. Select **New** from the drop down menu if proceeding from **File**. Select **New FD/SL…** from the menu if proceeding from the project icon. The **New** dialog box appears. The **Project** portion of the dialog box is displayed by default.



3. Click the **FD/SL** tab. The **FD/SL** dialog box appears.



4. Click the **Blank** icon.
5. In the **FD/SL name** field enter a name for the FD/SL file that is to be imported.
6. In the **Unique prefix** field enter a prefix for the FD/SL file that is to be imported.
7. In the **Location** field enter a file path for the new FD/SL file.
8. Click **OK**. The new blank FD/SL file appears in the project workspace.

Importing FD/SL Data

There are several ways for a user to incorporate existing FD/SL files into a DCIBench project. These methods include:

- Importing FD/SL data directly from an extisting XFD/XML layout file (.xlt)
- Importing FD/SL data from a copy book (.fd and .sl) or COBOL code
- Importing FD/SL data from a database directly

➲ **To import data directly from a .xlt file:**

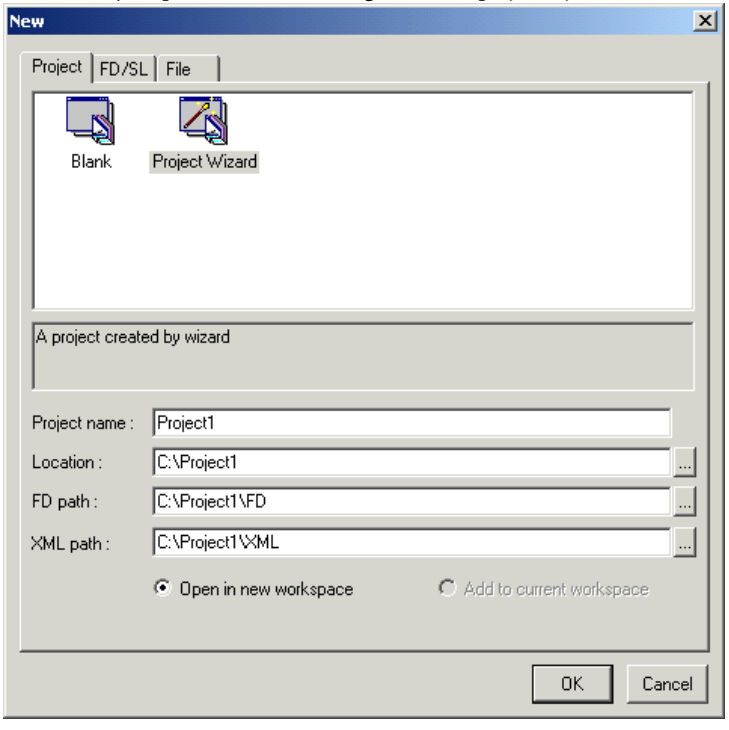
1. Right click the project folder in the project workspace. A pop up menu appears.
2. Select **Add FD/SL…** from the pop up menu. The **Add Data Layout to**

Project dialog box appears.

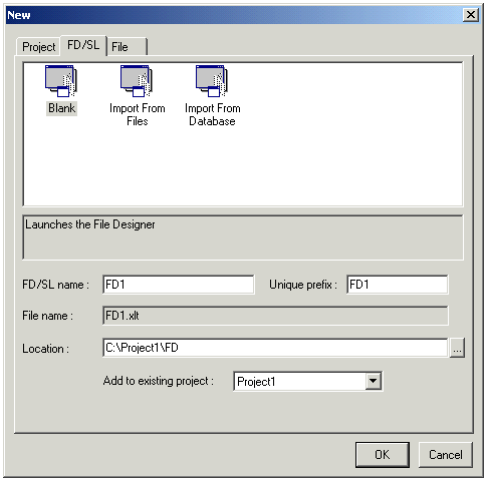
3. Select the file to be added to the project and click **OK**. The file appears in the project workspace.

➲ **To import data from COBOL code:**

1. Select **File** from the **Menu Bar**. A drop-down menu appears.
2. Select **New** from the drop down menu. The **New** dialog box appears. The **Project** portion of the dialog box is displayed by default.



3. Click the **FD/SL** tab. The **FD/SL** dialog box appears.



4. Click the **Import From Files** icon.

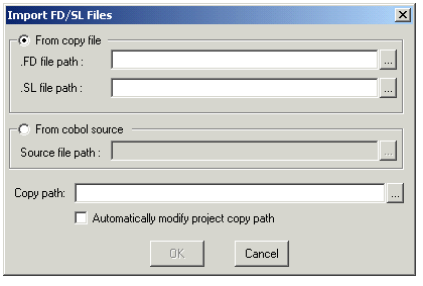
5. In the **FD/SL name** field enter a name for the FD/SL file that is to be imported.

6. In the **Unique prefix** field enter a prefix for the FD/SL file that is to be imported.

7. In the **Location** field enter a file path for the FD/SL file that is to be imported.

8. Select a project for the file to be imported to from the **Add to existing project** combo box.

9. Click **OK**. The **Import FD/SL Files** dialog box appears.



10. To import a file from a pair of copy files (.fd and .sl) select the **From copy file** radio and continue to step 11. To import a file from a COBOL file select the **From cobol source** radio button and continue to step 13.

11. Click the **Browse** button in the **.FD file path** or the **.SL file path** fields. The **Select FD file** or **Select SL file** dialog box appears depending on which **Browse** button was selected.

12. Select the file to be imported and click **OK**. The **Import FD/SL Files** dialog box appears. Continue to step 15.

13. Click the **Browse** button in the **Source file path** field. The **Select Source File** dialog box appears.

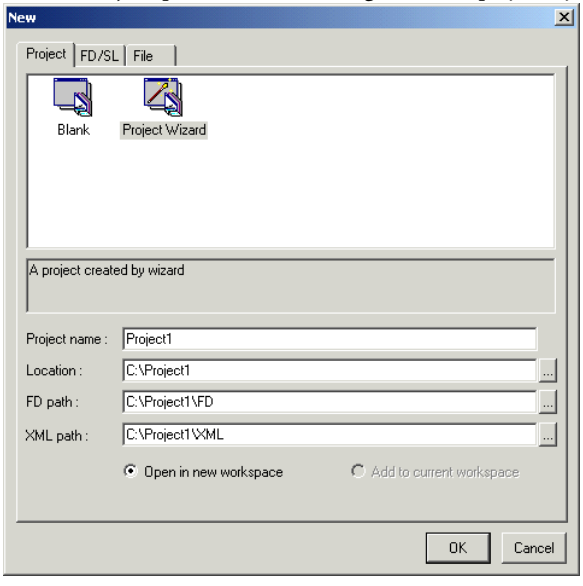
14. Select the file to be imported and click **OK**. The **Import FD/SL Files** dialog box appears.

15. Click **OK**. The imported file appears in the project workspace.

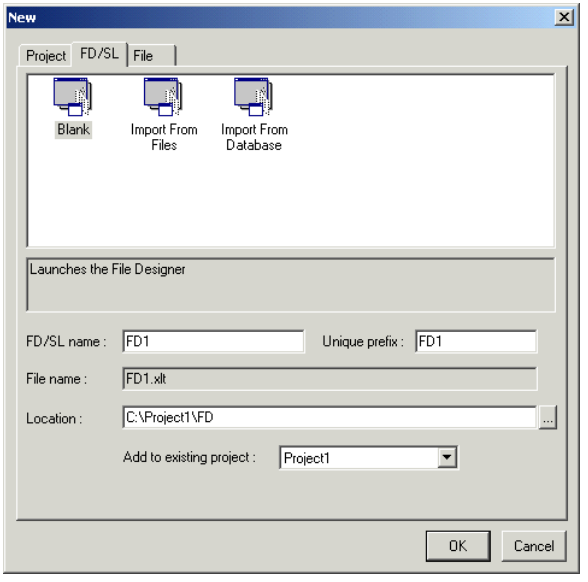
➲ **To Import FD/SL data from a database:**

1. Select **File** from the **Menu Bar**. A drop-down menu appears.

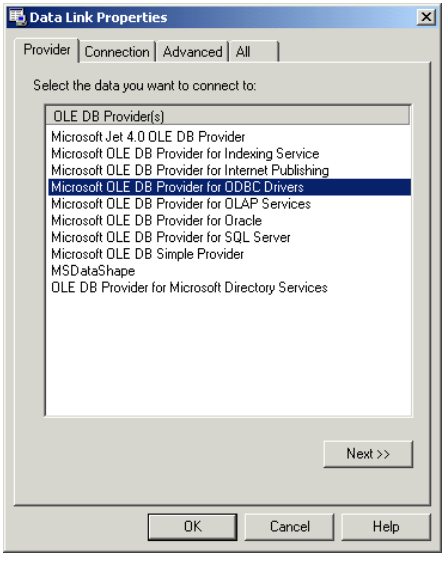
2. Select **New** from the drop down menu. The **New** dialog box appears. The **Project** portion of the dialog box is displayed by default.



3. Click the **FD/SL** tab. The **FD/SL** dialog box appears.

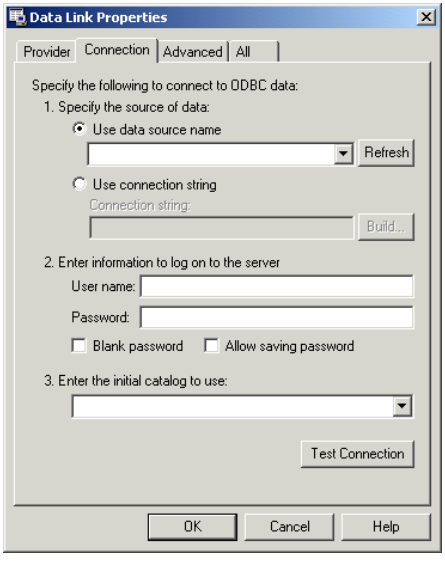


4. Click the **Import From Database** icon.
5. In the **FD/SL name** field enter a name for the FD/SL file that is to be imported.
6. In the **Unique prefix** field enter a prefix for the FD/SL file that is to be imported.
7. In the **Location** field enter a file path for the FD/SL file that is to be imported.
8. Select a project for the file to be imported to from the **Add to existing project** combo box.
9. Click **OK**. The **Data Link Properties** dialog box appears.



10. Select the data link from the **Provider** tab.

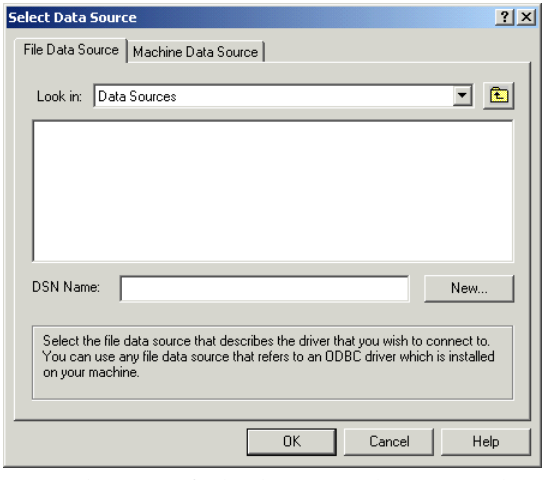
11. Click **Next**. The **Connection** tab appears. Use data source name is selected by default. To specify the data source from the **Connection String** field go to step 14.



a) Select a data source from the **Data Source** combo box. Continue to step15.

12. Select **Use Connection String**. The **Connection String** field and the Build button become active.

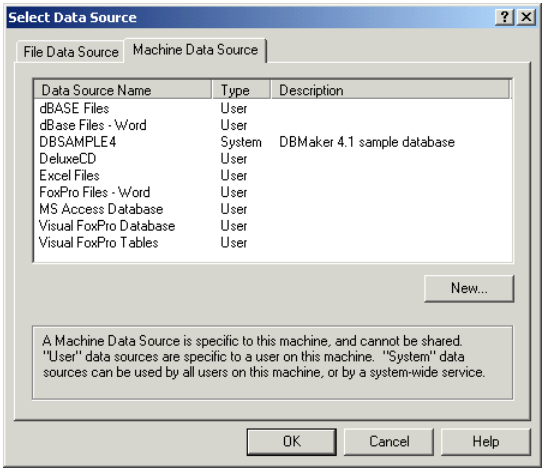
a) Click the **Build** button. The **Select Data Source** dialog box appears.



b) Specify the data source location in the **Look In** combo box.

c) Enter a DSN (Data Source Name) in the **DSN Name** field.

d) Click the **Machine Data Source** tab. The **Machine Data Source** dialog box appears.



e) Select the data source from the **Data Source Name** list.

f) Click **OK**. The **Connection** dialog box appears.

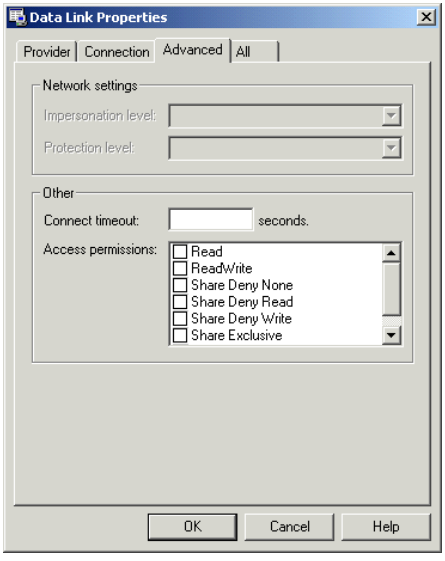
13. Enter a username for the database in the User name field.

14. Enter the password for the database in the **Password** field.

15. Check the **Blank password** check box to allow a blank password for connection to the database.

16. Check the **Allow saving password** to allow passwords to be saved when connecting to the database.

17. Click the **Advanced** tab. The **Advanced** dialog box appears.

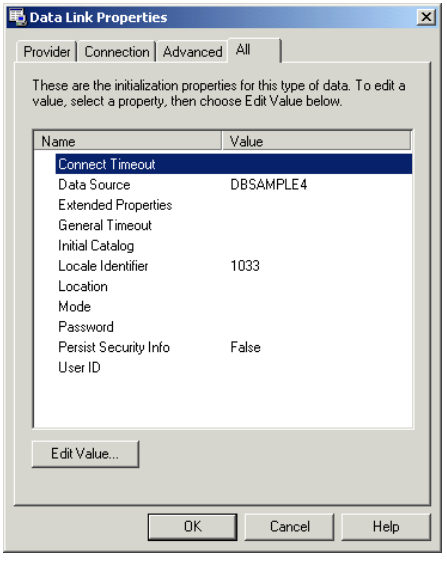


18. Set the network settings in the **Network Settings** portion of the dialog box.

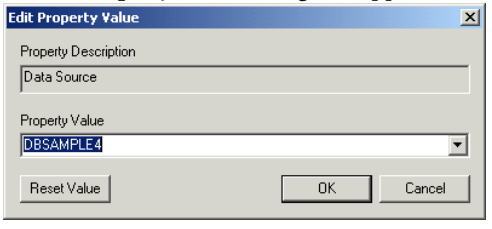
19. Set the connection time out limit in the **Connect timeout** field.

20. Set the file access permissions in the **Access permissions** field.

21. Click the **All** tab. The **All** dialog box appears.



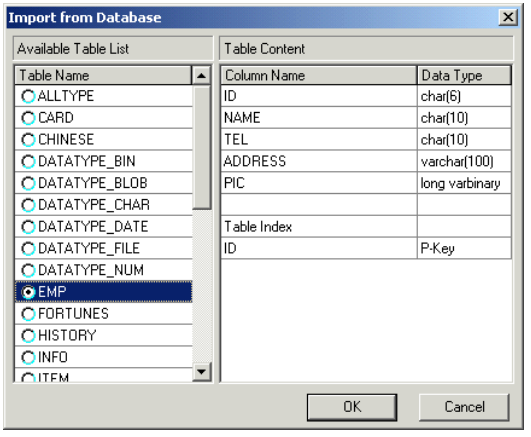
22. The initialization properties for the data are shown. To edit a value select the initialization property to be edited and click the **Edit Value** button. The **Edit Property Value** dialog box appears.



23. Enter the required value in the **Property Value** field.

24. Click **OK**. The **All** dialog box appears.

25. Click **OK**. The **Import From Database** dialog box appears.



26. Select the table to be imported.

27. Click **OK**. The imported FD/SL files appear in the project workspace.

File Descriptor Properties

Once FD/SL files have been created or imported the user can view the properties and, if required, modify the file name or the unique file prefix.

➲ **To view and modify File Descriptor properties:**

1. Right click an FD icon in the project workspace. A pop up list appears.

2. Select **Properties…** from the pop up list. The **Data Layout Properties** dialog box appears.

3. Enter an FD name in the **Name** field if the FD name is unsuitable.

4. Enter a prefix string in the **Unique prefix** field if the prefix string is unsuitable.

5. Click **OK** to save the desired settings.

Refreshing Files

Refreshing files causes the selected data layout file (.dlt) to be rebuilt from it's corresponding FD and SL files or COBOL file. All files in a project can be refreshed at once or individual files can be refreshed as the user requires.

➲ **To refresh an individual file in a project:**

1. Select an FD file from the project workspace. The FD will be highlighted.
2. Right click the selected FD file. A pop up list appears.
3. Select **Refresh**.

➲ **To refresh all files in a project:**

1. Right click the project icon in the project workspace. A pop up list appears.
2. Select **Refresh All** from the pop up list.

File Generation

After creating a project and creating or importing FD/SL files for the project the user is now ready to generate files in the DCIBench environment. FD and SL files and most importantly XML files can be generated in DCIBench.
There are several ways that files can be generated:

- Individual FD or SL files can be generated
- Individual XML files can be generated
- All FD and SL files can be generated for an entire project simultaneously
- All XML files can be generated for an entire project simultaneously
- All FD, SL and XML files can be generated for an entire project simultaneously

➲ **To generate an individual FD/SL file:**

1. Select the FD/SL file to be generated in the project workspace. The FD/SL will be highlighted.
2. Right click the selected file. A pop up list appears.
3. Select **Generate FD/SL** from the pop up list.

TIP DCIBench can also generate FD/SL files by right clicking in the File Designer while the file is active in the File Designer. Select **Generate FD/SL** from the pop up menu that appears to generate the file .

➲ **To generate all FD/SL files for a project:**

1. Right click the project icon in the project workspace. A pop up list appears.
2. Select **Generate All FD/SLs**.

➲ **To generate an individual XML file:**

1. Select the desired FD/SL file in the project workspace. The FD/SL will be highlighted.
2. Right click the selected file. A pop up list appears.
3. Select **Generate XML** from the pop up list.

TIP DCIBench can also generate XML files by right clicking in the File Designer while the file is active in the DCI page of the File Designer. Select **Generate XML** from the pop up list to generate the file.

➲ **To generate all XML files for a project:**

1. Right click the project icon in the project workspace. A pop up list appears.
2. Select **Generate All XMLs**.

➲ **To generate all FD/SL and XML files simultaneously:**

1. Right click the project icon in the project workspace. A pop up list appears.
2. Select **Generate All**.

Modifying Generated Files

File modification in DCIBench is easily accomplished by using the File Designer or the Code Editor.

Using the File Designer the user is able to utilize the graphical interface of the File Designer to rapidly modify FD, SL and XML files generated by DCIBench. Chapter 6 gives an in-depth look at the File Designer.

The Code Editor provides the user a more hands on approach to modifying the code generated by DCIBench. The user is able to see the raw code and make direct modifications that might be required. Chapter 5 provides a more detailed look at the Code Editor.

Saving a Project Workspace

A Project Workspace and its contents will automatically be saved upon closing or exiting the Project, or before generating FD/SL. It is still recommended that components be periodically saved to prevent the loss of work due to system limitations, malfunctions, or other unforeseen events.

➲ **To save a Project Workspace:**

1. Select **File** from the **Menu Bar**, the drop-down menu appears.
2. Select **Save Workspace** to save the active (opened) **Project Workspace** and its components.

Closing a Project

Projects from within the Project Workspace may be individually closed. When closing a project, a pop-up confirmation dialog will appear for each unsaved FD/SL opened for the corresponding project. Closing projects or any other component is a good measure to save resources and to keep the Canvas Area and Project Workspace tidier for a more efficient work environment.

➲ **To close a single project:**

1. Select a project from the **Project Workspace**; the project is highlighted.
2. Right-click on the project node and a pop-up menu appears.
3. Select **Close Project.** If any unsaved FD/SL's exist, a pop-up confirmation dialog will appear with project name in the message.
   - **a)** To save the changes, select **Yes**; the changes are saved and the component closes.
   - **b)** To not save the changes, select **No**, the changes are not saved and the component closes.
   - **c)** To cancel closing the project, select **Cancel**; the close is cancelled and the project remains open.
4. The project and every component in the **Canvas Area** belonging to the project closes.

Closing a Project Workspace

Closing any component within the Project Workspace will simply close it and not save any of the changes until one of the save options has been chosen, whereas closing a Project Workspace will close all components contained within the Project Workspace. When closing a Project Workspace a dialog window appears displaying a list of all changed files, requesting a confirmation to accept each of the changes.

➲ **To close a Project Workspace:**

1. Select **File** from the **Menu Bar**. A drop-down menu appears.
2. Select **Close Workspace** or **Exit**. The **Close** confirmation dialog box appears displaying all unsaved changes (this dialog box will only appear if there are unsaved changes).
3. The dialog box contains a directory path with a check mark next to it for each FD/SL/project, select one of the following:
   a) Select **Yes** to save all changes.
   b) Select **No** to save none of the changes.
   c) Remove the check marks from the unwanted changes and select **Yes** to save the selected changes.
4. The **Close** confirmation dialog box and the **Project Workspace** close. If the **Exit** option was chosen then DCIBench will also close.

3 The Code Editor

This chapter introduces the components that are directly related to DCIBench Code Editor functions. These functions faciliate the generation and maintaince of FD, SL and XML files.
The Code Editor windows containing source files appear in the Canvas Area of DCIBench. Each window element contributes to efficient source code generation and maintenance.

The Ruler Bar

The Ruler Bar appears at the top of each Code Editor window. It shows the current document's column numbers and tab settings for the document. The Ruler Bar can be displayed or hidden by setting or clearing the **View -> RulerBar** option.

The Line Number Pane

The Line Number Pane appears to the left of each Code Editor window. Each text line's number appears in this pane. The Line Number pane must be set for the line numbers to be visible. The Line Number Pane can be displayed or hidden by setting or clearing the **View -> Line Number Pane** option.

The Bookmark Pane

The Bookmark pane appears between the Line Number Pane and each Code Editor window. It contains the bookmarks that have been inserted in the code for reference and navigation purposes. The Code Editor displays an icon in the Bookmark pane to show that a line has been bookmarked. The Bookmark Pane can be displayed or

hidden by setting or clearing the **View -> Bookmark** option.

The Output Window

The Build tab of the Output window displays output messages related to various DCIBench functions. When code is being generated the generation status is displayed in the Output Window.

Splitting the Window

The Split function for the Code Editor literally splits the Code Editor window in two pieces. By splitting the Code Editor window the user is able to view and modify code in a more effiecent manner. Each portion of the window have their own scroll bars for easy code navigation. The Splitter is accessed by selecting **Split** from the **Window**, **Menu Bar** items.

File Menu Commands

The following is a list of the Code Editor commands available in the File menu command list. These commands will assit the user when modifiying or generating source code.

- **New:** Opens a new source file
- **Open:** Opens an existing source file
- **Close:** Closes the active document
- **Save:** Saves the contents of the active document
- **Save As:** Saves a copy of the active document
- **Save All:** Saves the contents of all open documents
- **Page Setup:** Define headers, footers, and some page attribute settings for the active document
- **Print Setup:** Change the printer and certain print properties
- **Print Preview:** View the active document in its print format before printing
- **Print:** Sends the active document to the printer

Edit Menu Commands

The following is a list of the Code Editor commands available in the Edit menu command list. These commands will assit the user when modifiying or generating source code.

- **Undo:** Reverses previous editing actions
- **Redo:** Reverses the most recent undo operation
- **Cut:** Removes the selection from the active document and places it on the clipboard
- **Copy:** Places a copy of the selection on the clipboard
- **Paste:** Places a selection that has been cut or copied to the clipboard into the active document at the cursor location
- **Delete:** Removes the selection from the active document
- **Select All:** Selects all the elements in the active document
- **Find:** Find multiple occurrences of a text string in the active document
- **Find Next:** Advances to the next occurrence of the selected item in the active document
- **Find in Files:** Locate text strings in files stored on drives
- **Replace:** Replace items in the text with other items
- **Go To:** Relocate the cursor at a specific destination in the active document
- **Bookmark:** Insert a bookmark into the Bookmark pane for the selected line, move to the previous or next bookmark, or clear all bookmarks from the active document

Format Menu Commands

The following is a list of the Code Editor commands available in the Format menu command list. These commands will assit the user when modifiying or generating source code.

- **Capitalize:** Capitalizes uncapitalized words in a selection

- **Uppercase:** Changes all lowercase characters in a selection to uppercase
- **Lowercase:** Changes all uppercase characters in a selection to lowercase.
- **Comment Block:** Select a block of text in your source code and apply comment symbols in the Indicator area
- **Uncomment Block:** Remove comment markings from a block of text in source code that is currently marked for comment
- **Sequence Number:** Re-number source code and display the new numbering in the Sequence Number area
- **Indent to Next:** Changes the indent of the current line to match that of the next line
- **Indent to Previous:** Changes the indent of the current line to match that of the previous line.
- **ANSI to Terminal Format:** Toggles the foreground and background colors of source code between ANSI and terminal format, as was defined them in the **Tools -> Options -> Code Editor -> Format** options.

Standard Toolbar Commands

The Standard toolbar is a palette of command buttons for most commonly used word processing functions. You can display or hide the Standard toolbar by choosing the **View/Toolbar/Standard** command. You can also display or hide the Standard toolbar by right-clicking in the toolbar and choosing **Standard**, or by selecting **Customize** and then **Standard** in the Customize dialog box. The Standard toolbar contains the following commands:

- The **New**  button opens the New dialog box.
- The **Open**  button opens an existing file.
- The **Save**  button saves the active file using its current file name.
- The **Save All**  button saves all open files.
- The **Print**  button sends the active file to a printer.
- The **Print Preview**  button allows a view on an active file before printing.

- The **Cut**  button removes the selected item and places it on the clipboard.
- The **Copy**  button places a copy of the selected item on the clipboard.
- The **Paste**  button places a selection that has been cut or copied to the clipboard into the active file.
- The **Undo**  button reverses recent editing actions.
- The **Redo**  button reverses recent undo operations.
- The **Workspace**  button toggles the view of the workspace in DCIBench.
- The **Output Window**  button toggles the view of the Output window in DCIBench.
- The **Generate**  button generates FD/SL files.
- The **Refresh**  button refreshes files in DCIBench.
- The **About**  button displays the DCIBench identification and copyright information.

Editor Toolbar Commands

The Editor toolbar commands allow users to quickly access commomly used text search and replace functions and bookmark management functions.

- The **Find**  entry field allows users to enter the text string they want to find. It also allows users to select text from a drop-down list of recent search operations.
- The **Find Next**  button advances the user to the next occurrence of the selected item in the active document.
- The **Find in Files**  button allows the user to locate text strings in files stored on drives.
- The **Replace**  button allows the user to replace items in the text with other items.
- The **Replace in Files**  button allows the user to replace text strings in files stored on drives.

- The **Toggle Bookmark**  button inserts a bookmark into the Bookmark pane for the selected line.
- The **Go to Next Bookmark**  button allows a user to automatically move the cursor to the next bookmarked line.
- The **Go to Previous Bookmark**  button allows a user to automatically move the cursor to the previous bookmarked line.
- The **Clear All Bookmarks**  button allows a user to clear all bookmarks from the active document.

3.1 Working with Source Code

DCIBench's Code Editor provides users with an efficient, flexible and easy to use source code management environment. The DCIBench Code Editor provides users with all the functions necessary to find, insert, delete and modify source code.

Navigating Text

The following default keyboard commands allow users to move through text. The Command field in the table indicates the keyboard command found in **Tools -> Options -> Environment -> Keyboard**. The Shortcut Key field indicates which keyboard key(s) need to be pushed to execute the keyboard command. And the Action field of the table indicates the action that is preformed in the Code Editor when the shortcut is used.

COMMAND	SHORTCUT KEY	ACTION
CharRight	Right Arrow	Move one character to the right.
CharLeft	Left Arrow	Move one character to the left.
WordRight	Ctrl + Right Arrow	Move one word to the right.
WordLeft	Ctrl + Left Arrow	Move one word to the left.
LineEnd	End	Move to the end of the current line of text.
Home	Home	Move to the beginning of

		the current line of text.
LineDown	Down Arrow	Move down to the next line.
LineUp	Up Arrow	Move up to the previous line.
PageDown	Page Down	Move to the next page of text.
PageUp	Page Up	Move to the previous page of text.
DocumentEnd	Ctrl + End	Move to the end of the document.
DocumentStart	Ctrl + Home	Move to the beginning of the document.
GoToLine	Ctrl + G	Move to any specified location in the document.

MOVING TO A SPECIFIED LOCATION

By using the **Edit -> Go To** commands in DCIBench the user can move the cursor to the beginning, the end or to any specified line of text in the document.

➲ **To move to the beginning of a document:**

1. With the Code Editor active in the Canvas Area, click **Edit** from the Menu bar. A pop up list appears.
2. Highlight **Go To** from the pop up list. A sub menu appears.
3. Select **Begin** from the sub menu. The cursor moves to the beginning of the document in the Code Editor.

➲ **To move to the end of a document:**

1. With the Code Editor active in the Canvas Area, click **Edit** from the Menu bar. A pop up list appears.
2. Highlight **Go To** from the pop up list. A sub menu appears.
3. Select **End** from the sub menu. The cursor moves to the end of the document in the Code Editor.

➲ **To move to any specified location in a document:**

1. With the Code Editor active in the Canvas Area, click **Edit** from the Menu bar. A pop up list appears.

2. Highlight **Go To** from the pop up list. A sub menu appears.
3. Select **Line** from the sub menu. The cursor moves to the specified location in the document in the Code Editor.

Using Bookmarks

Bookmarkers are guides that the Code Editor allows users to insert to provide quick and simple navigation of source code text. These markers do not alter source code text in any way. These markers simply provide a more efficient manner for source code navigation.

Bookmarks are only visible in the Bookmark Pane. The Code Editor displays a bookmark icon to indicate that a line of code has been bookmarked. Even if the Bookmark Pane is not visible bookmark navigation is possible. Bookmark navigation is not dependent upon bookmark visibility.

➲ **To insert a bookmark into a document:**

1. With the Code Editor active in the Canvas Area, select the line of text to be bookmarked.
2. Click the **Toggle Bookmark** button in the Editor Toolbar. The Bookmark icon is inserted.

TIP Display the Bookmark Pane if you want the bookmark icon to be visible beside the bookmarked line of text.

➲ **To delete a bookmark from a document:**

1. With the Code Editor active in the Canvas Area, select the bookmarked line of text.
2. Click the **Toggle Bookmark** button in the Editor Toolbar. The Bookmark icon is deleted.

TIP Display the Bookmark Pane if you want visible confirmation that the bookmark has been deleted.

➲ **To clear all bookmarks in a document:**

1. Click the **Clear all bookmarks** button in the Editor Toolbar, with the Code Editor active in the Canvas Area.

TIP Display the Bookmark Pane if you want visible confirmation that all bookmarks has been deleted.

Using Tabs

DCIBench's Code Editor Tabs function provide another source for code navigation. Users can tab to the specified column by pressing **Tab** or **Shift +Tab**. The user can also set an interval for tab. This function is set in the **Tools -> Options -> Code Editor -> Tabs** options. The Code Editor allows users to set and maintain different sets of custom tab stops for code in ANSI source format and terminal source format. Tabs may also be used to move blocks of text in source code. Highlight the lines of code to be moved and press the **Tab** key. The entire block of text shifts the number of places indicated in the **Tools -> Options -> Code Editor -> Tabs** options.

Using the Splitter

The Split function for the Code Editor literally splits the Code Editor window in two pieces. By splitting the Code Editor window the user is able to view and modify code in a more effiecent manner. Each portion of the window have their own scroll bars for easy code navigation.

➲ **To split the Code Editor window:**

1. Select **Window** from the Menu Bar, with the Code Editor active in the Canvas Area. A pop up list appears.
2. Select **Split** from the pop up list. A small bar appears in the Code Editor.
3. Left click when the Code Editor is split in the desired proportions.

3.2 Setting Page Options

DCIBench supports the setting of header, footer, background and margin settings for sorce code pages.These settings alter the apperance of pages printed containing source code.

Headers and Footers

User have may options when setting headers and footers. The header and footer text alignment can be set. The text can be aligned to the left, right or to the centre of the page. The DCIBench supports headers and footers displaying the full file pathname,

the filename, the page number, the current time and the current date.

➲ **To set header or footer options:**

1. Select **File** from the **Menu Bar**. A pop up list appears.
2. Select **Page Setup…** from the pop up list. The **Page Setup** dialog box appears.
3. Click the Browse  button. A pop up list appears.
4. Select the elements to appear in the header or footer.

TIP After setting the page options click the **Print Preview** button in the Editor Toolbar to view the page before printing.

➲ **To set the page appearance:**

1. Select **File** from the **Menu Bar**. A pop up list appears.
2. Select **Page Setup…** from the pop up list. The **Page Setup** dialog box appears.
3. Select a page style from the **Style** drop down list.
4. Set the **Print line number** check box to print the source code line numbers.
5. To "frame" the footers in a document make a selection from the **Frame** drop down list. The options available are determined by the **Print line number** option.
6. Set the document's margins if the default settings are unsuitable.

TIP After setting the page options click the **Print Preview** button in the Editor Toolbar to view the page before printing.

3.3 Working with Text

DCIBench's Code Editor provides users with a flexible, easy to use source code editing and management environment.

State Dependant Functions

DCIBench integrates many development functions into a single FD/SL and GUI. These functions are dependant on the "state" of the DCIBench environment. The Open, Save, Close, Cut, Copy, Paste, Undo and Redo functions are state dependant

functions. When using these functions users must be aware of DCIBench's current state.

For example, if a user intiates a Save when in the Code Editor, the file that is currently being modified will be saved. If the user then switches to the File Designer and performs a save the files associated with the file active with the selected FD will be saved. Use Save All to save all open files.

Opening Code Editor Files

New and existing source code files can be opened in the Code Editor. When opening a new file users have the option of creating a blank new file or creating a file using a file template.

➲ **To create a blank new source code file:**

1. Select **File** from the Menu Bar. A pop up list appears.
2. Select **New** from the pop up list. The **New** dialog box appears.
3. Select the **File** tab in the **New** dialog box. The **File** page is displayed.
4. Select the **Blank** icon in the **File** page. The **Blank** icon is highlighted.
5. Set the filename in the in the **Filename** field.
6. Set the file path in the **Location** field.
7. Click **OK**. The new file appears in the Code Editor.

➲ **To create a source code file using a template:**

1. Select **File** from the Menu Bar. A pop up list appears.
2. Select **New** from the pop up list. The **New** dialog box appears.
3. Select the **File** tab in the **New** dialog box. The **File** page is displayed.
4. Select the **Template** icon in the **File** page. The **Template** icon is highlighted.
5. Set the filename in the in the **Filename** field.
6. Set the file path in the **Location** field.
7. Click **OK**. The new file appears in the Code Editor.

➲ **To open an existing source code file:**

1. Select **File** from the Menu Bar. A pop up list appears.
2. Select **Open** from the pop up list. The **Open** dialog box appears.
3. Navigate to the desired file and click **OK**. The file appears in the Code Editor.

Selecting Text

Text can be selected using the mouse or by using the listed keyboard short cuts. The Command field in the table indicates the keyboard command found in **Tools -> Options -> Environment -> Keyboard**. The Shortcut Key field indicates which keyboard key(s) need to be pushed to execute the keyboard command. And the Action field of the table indicates the action that is preformed in the Code Editor when the shortcut is used.

COMMAND	SHORTCUT KEY	ACTION
CharRightExtend	Shift + Right Arrow	Select one character to the right.
CharLeftExtend	Shift + Left Arrow	Select one character to the left.
WordRightExtend	Ctrl + Shift + Right Arrow	Select one word to the right.
WordLeftExtend	Ctrl + Shift + Left Arrow	Select one word to the left.
LineDownExtend	Shift + Down Arrow	Select the next line or lines of text.
LineUpExtend	Shift + Up Arrow	Select the previous line or lines of text.

TIP To perform a vertical block hold down the ALT key while dragging the cursor across the desired text.

Moving Text

The Cut, Copy and Paste functions allow users to move text in a document. Select the text in the document and choose the required command from the Editor toolbar.

Deleting Text

Deleting text is a very simple task. Select the text to be removed and push the **Delete** button on the keyboard or select **Edit -> Delete**.

Changing Text Case and Indent

The Code Editor allows users the change the case and indent of text without retyping the text. The text case and indent functions are all found in the **Format Menu Bar** pop up list. The options available are:

- **Capitalize:** This option allows users to capitalize the first letter of the words in the selection. The remainder of the text will be in lower case letters.
  For example:

```
Generated By Casemaker Dcibench
```

- **Uppercase:** This option allows users to make all letters in the selection uppercase letters.
  For example:

```
GENERATED BY CASEMAKER DCIBENCH
```

- **Lowercase:** This options allows users to make all letters in the selection lowercase letters.
  For example:

```
generated by casemaker dcibench
```

- **Indent to Next**: This option allows users to set the indent of the selection to the indent of the next line of text.
- **Indent to Previous:**This option allows users to set the indent of the selection to the indent of the previous line of text.

Text Block Handling Functions

The Code Editor has text block handling functions that allow users to manipulate source code in a variety of ways. Use the **Format/Comment Block** or **Format/Uncomment Block** commands to add comment markings to or delete markings from a selected block of text. The Format/ANSI to Terminal Format command toggles the foreground and background colors of source code between

ANSI and terminal format, as were defined them the **Tools-> Options -> Code Editor - > Format** options.

Working with COPY Files

Users are able to open COPY files from the Code Editor or the File Designer. To open a COPY file users must first set the correct COPY file path in the Project Properties dialog box. The COPY file functions are located in a pop up menu that is located in the Code Editor and the File Designer. While in the File Designer or the Code Editor a user simply right clicks in the Canvas Area for the pop up window to appear.

Source Code Templates

Users are able to add existing source code files to new text files as a template through the Tools -> Options -> Environment -> Template interface. The Add option in the interface allows users to open the Add New Template File dialog box. Using the dialog box, users are able to import the desired file. The file will appear in the interface and in the File -> New -> File dialog box.
After creating the file it can be deleted or modified in the Template interface. For more information about the Template interface see Chapter 3.3.

Searching for Text

DCIBench provides two utilities for locating text in files and replacing that text if desired. The first searches for a string in a file that is open in the Code Editor. The second searches for a string in any readable file located in the specified directory or device. Both facilities support the use of operators and special characters in the search string.

SEARCH STRING OPERATORS

Search string operators are wildcards that can be used to match special conditions or multiple conditions. The following operators can be used individually or in groups to help facilitate the search.
The following table lists the operators available to users. To select an operator, set

the **Regular expressions** check box in the Find, Find in Files, Replace and Replace in Files dialog boxes. Click the Browse button to the right of the "Find what" entry field, and select an operator from the list.

EXPRESSION	LIST ELEMENT	ACTION
.	Any Character	Matches any character.
[ ]	Character in Range	Matches any character in the specified range.
[^]	Character Not in Range	Matches any character not in the specified range.
^	Beginning of Line	Matches the beginning of the specified string.
$	End of Line	Matches the end of the specified string.
\ <	Beginning of Word	Matches the beginning of the specified word.
\ >	End of Word	Matches the end of the specified word.
\ [\ ]	Tagged Expression	Matches the specified expression.
*	0 or More Matches	Matches any character zero or more times.
+	1 or More Matches	Matches any character one or more times.
\	Quoted String	Matches the quoted string.

➲ **To find a text string in an active file:**

1. Move the cursor to the location where the search will begin.
2. Click **Edit** from the **Menu** bar. A pop up list appears.
3. Select **Find** from the pop up list. The **Find** dialog box appears.
4. Enter the text string to be search for in the **Find what** field.
5. Set the **Match case** check box to find the exact specified text string.
6. Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.
7. Set the **Wrap around search** check box to have the search start from the

beginning of the document after the seach has reached the end of the document.

8. Set the **Ignore `-' and `_'** check box to direct the search operation to ignore hyphens and underscores.

9. Select the desired direction of the search using the **Up** and **Down** radio buttons in the **Direction** section of the dialog box.

10. Click the **Find Next** button to search for the desired text string. Click the **Find Next** button again to find the next occurrence of the desired text string.

TIP Clicking the **Mark All** button will mark each line of text with the desired text string,in the Code Editor, with a bookmark.

TIP Clicking the **Find All** button will direct the search operation to find all occurences of the desired text. The results of the search will be displayed in the **Find in Files** pane of the **Output Window**.

➲ **To replace a text string:**

1. Move the cursor to the location where the search will begin.

2. Click **Edit** from the **Menu** bar. A pop up list appears.

3. Select **Replace** from the pop up list. The **Replace** dialog box appears.

4. Enter the text string to be search for in the **Find what** field.

5. Enter the replacement text string in the **Replace with** field that is to replace the text in the **Find what** field.

6. Set the **Match case** check box to find the exact specified text string.

7. Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.

8. Set the **Wrap around search** check box to have the search start from the beginning of the document after the seach has reached the end of the document.

9. Set the **Ignore `-' and `_'** check box to direct the search operation to ignore hyphens and underscores.

10. Select the desired direction of the search using the **Up** and **Down** radio buttons in the **Direction** section of the dialog box.

11. Click the **Find Next** button to search for the desired text string.

12. Click **Replace** to replace the text in the **Find what** field with the text in the

Replace with field.

13. Click the **Find Next** button again to find the next occurrence of the desired text string.

TIP Click **Replace All** to replace every occurrence of the text in the **Find what** field with the text in the **Replace with** field.

➲ **To find a text string in all files:**

1. Move the cursor to the location where the search will begin.
2. Click **Edit** from the **Menu** bar. A pop up list appears.
3. Select **Find in Files** from the pop up list. The **Find in Files** dialog box appears.
4. Enter the text string to be search for in the **Find what** field.
5. Select the type of file to be searched in the **File types** drop down list.
6. Set the **Match case** check box to find the exact specified text string.
7. Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.
8. Set the options in the **Where** section of the dialog box
   a) Select the **Search in workspace** radio button to seach for the text string in a file that is in DCIBench. Continue to step 11.
   b) Select the **Search in directories** radio button to search for the text string in a specific directory. The **Search directories** options section of the dialog box becomes active. Continue to step 9.
9. Select the directory to be searched in the **Look in** field. Or click the **Browse** button for further search options
10. Set the **Include subdirectories** check box to include the subdirectories in the search.
11. Click the **Find** button to search for the desired text string. The results of the search are displayed in the **Find in Files** pane of the **Output Window**.

➲ **To replace a text string in all files:**

1. Move the cursor to the location where the search will begin.
2. Click **Edit** from the **Menu** bar. A pop up list appears.
3. Select **Replace in Files** from the pop up list. The **Find in Files** dialog box

appears.

4. Enter the text string to be search for in the **Find what** field.
5. Enter the replacement text string in the **Replace with** field that is to replace the text in the **Find what** field.
6. Select the type of file to be searched in the **File types** drop down list.
7. Set the **Match case** check box to find the exact specified text string.
8. Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.
9. Set the options in the **Where** section of the dialog box
   a) Select the **Search in workspace** radio button to seach for the text string in a file that is in DCIBench. Continue to step 12.
   b) Select the **Search in directories** radio button to search for the text string in a specific directory. The **Search directories** options section of the dialog box becomes active. Continue to step 10.
10. Select the directory to be searched in the **Look in** field. Or click the **Browse** button for further search options
11. Set the **Include subdirectories** check box to include the subdirectories in the search.
12. Click **Replace All** to replace every occurrence of the text in the **Find what** field with the text in the **Replace with** field. The results of the operation are displayed in the **Find in Files** pane of the **Output Window**.

Finding Matched Verb Block Command Lines

Users can move the cursor automatically to the opposite end of a matched verb block command line. Matched verb blocks are pairs of commands that begin and end a statement. DCIBench recognizes the following list of matched verbs as pairs:

INITIAL STATEMENT	END STATEMENT
Add	End-Add
Call	End-Call
Evaluate	End-Evaluate
If	End-If
Perform	End-Perform
Read	End-Read
Return	End-Return
Rewrite	End-Rewrite
Search	End-Search
Start	End-Start
String	End-String
Write	End-Write

Previewing Files Before Printing

DCIBench supports the previewing of an opened file before printing. Using this option will give users a graphical representation of an opened document before it is printed. The user has several options when viewing the page including zooming in, zooming out and printing directly form the Print Preview page. The table below details the options available to users.

Options	Action
Print	Clicking this button sends the active document to a printer.
Next Page	Clicking this button allows the user to advance to the next page in the active document.
Prev Page	Clicking this button allows the user to retreat to the previous page in the active document.
Two Page	Clicking this button allows the user to view to pages of the active document simultaneously.
One Page	Clicking this button allows the user to view a single page of the active document. This button is only active when the user has clicked the **Two Page** button and is viewing two pages from the active document.
Zoom In	Clicking this button allows the user to zoom in for a closer look at the active document.
Zoom Out	Clicking this button allows the user to zoom out for a broader look at the active document.
Close	Clicking this button closes the **Print Preview** page.

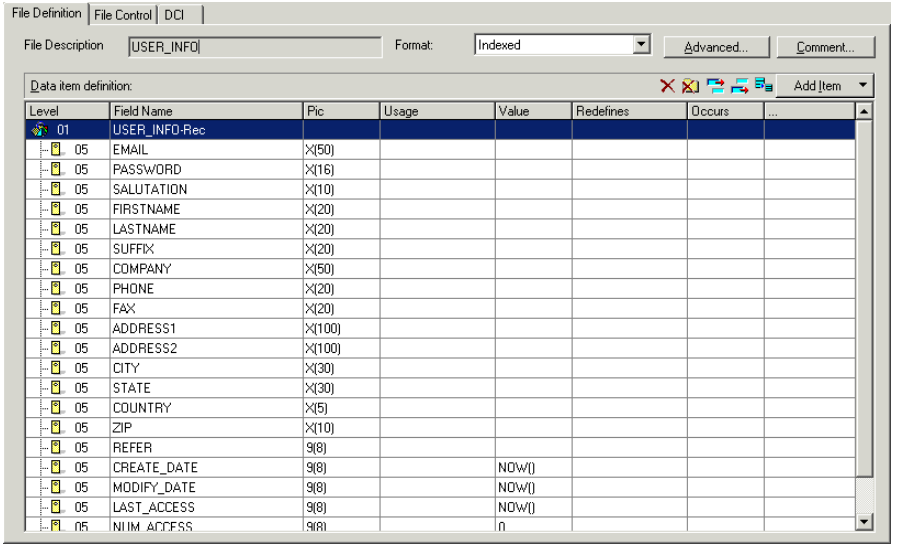
➲ **To preview an active file:**

1. With an active document in the Code Editor, select **File** from the **Menu Bar**. A pop up list appears.
2. Select **Print Preview** from the pop up list. The **Print Preview** page opens with the active document appearing in the page. The user has several options when viewing the page. Refer to the table above for more details.

4 File Designer

The File Designer is used to define the physical files contained within a project, including file-control-entries, file-description-entries, keys, and XML files.
The file designer consists of three sections, File Control, Definition, and DCI.
The File Control section of the File Designer deals with the SL files and record keys in a project. The Definition section of the File Designer handles the FD files for a project. Finally the DCI section deals with XML file options and generation.

4.1 Opening the File Designer



Level	Field Name	Pic	Usage	Value	Redefines	Occurs	...
01	USER_INFO-Rec						
05	EMAIL	X(50)					
05	PASSWORD	X(16)					
05	SALUTATION	X(10)					
05	FIRSTNAME	X(20)					
05	LASTNAME	X(20)					
05	SUFFIX	X(20)					
05	COMPANY	X(50)					
05	PHONE	X(20)					
05	FAX	X(20)					
05	ADDRESS1	X(100)					
05	ADDRESS2	X(100)					
05	CITY	X(30)					
05	STATE	X(30)					
05	COUNTRY	X(5)					
05	ZIP	X(10)					
05	REFER	9(8)					
05	CREATE_DATE	9(8)		NOW()			
05	MODIFY_DATE	9(8)		NOW()			
05	LAST_ACCESS	9(8)		NOW()			
05	NUM_ACCESS	9(8)		0			

➲ **To open the File Designer:**

1. First expand a project in the **Data View** of the **Project Workspace**. This can be accomplished in two ways:
   a) Click the [+] to expand a project in the **Data View** of the **Project Workspace**.
   b) Double-click the project icon in the **Data View** of the **Project Workspace**.
2. Double-click a file icon in the expanded project. The **File Designer** appears.

Creating Files

DCIBench can be used to manipulate and generate FD/SL files with the File Designer.

➲ **To select an FD/SL file:**

1. Select **File** from the menu bar. A drop-down menu appears.
2. Select **New**. The **New** dialog box appears.
3. Click the **FD/SL** tab and select the **Blank** icon.
4. Enter an **FD/SL** file name in the **FD/SL Name** text box.

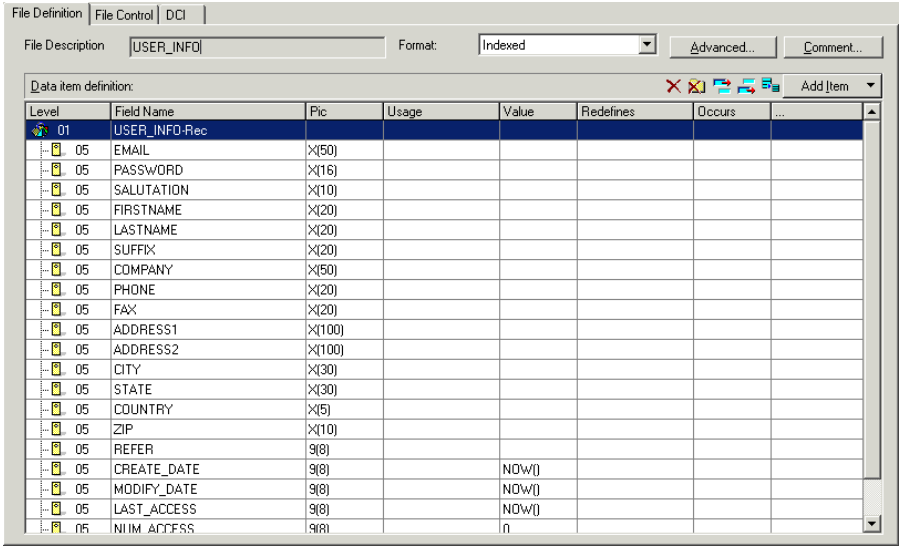
5. Enter a file path in the **Location** text box to specify the location of the **FD/SL** file and proceed to the next section, or search for a location by clicking **Browse** and proceed to step 6.

6. The **Choose Directory** dialog box appears. Select a location and click **OK**, the **Choose Directory** dialog box closes and the new path is displayed in the **Location** text box.

7. Click **OK**, the **FD/SL** file is added to the current project and the **File Designer** opens in the **Canvas area**.

4.2 File Definition

The Definition screen is used to define the file's record structure.



Setting FD/SL File Definitions

The **File Definition** page in the **File Designer** is used to define a file's record structure. Ensure that the **File Definition** page is displayed and select any of the options that follow.

SPECIFYING A FILE FORMAT

Select a file format from the **Format** drop down list. Specifying a file format in the File Definition page will carry over to the File Control page. For more information on specifying file formats refer section 6.3 File Control.

➲ **To specify a file format:**

1. Select a file format from the **Format** combo box. The selected file format appears in the drop-down list box.

ADVANCED OPTIONS

The Advanced Options dialog box allows users to specify additional definition screen options for the selected entry.

➲ **To set Advanced options:**

1. Click the **Advanced** button. The **Advanced** dialog box appears.
2. The **Declared** section of the dialog box allows users to select file declaration options.
   - **a)** Set the **External** check box to include the IS EXTERNAL phrase.
   - **b)** Set the **Global** check box to include the IS GLOBAL phrase.
   - **c)** Set the **Thread-Local** check box to include the IS THREAD-LOCAL phrase.
3. The **Detailed Attribute** area of the dialog box allows users to select file description entry phrases.
   - **a)** Set the **Block** check box to include the **BLOCK CONTAINS** phrase. This option is only available for sequential files.
     Enter the minimum and maximum block size in the entry fields to the right.
     Enable the appropriate radio button to specify physical record size in terms of either logical records or characters.
   - **b)** Set the **Code-Set** check box to include the **CODE-SET** phrase. This option is only available for sequential files.
     Enter the name of the desired **SPECIAL-NAMES** character set in the **Name** field.
   - **c)** Set the Label check box to include the **LABEL-RECORDS** phrase. The **LABEL-RECORDS** phrase is ignored by the compiler.
   - **d)** Set the **Linage** check box to include the **LINAGE** phrase.

This option is only available for sequential files.
In the entry fields to the right, specify the number of lines on a page, the line number where the footing area begins on the page, and the numbers of lines in the top and bottom margins.

e) Set the **Record** check box to include the **RECORD** phrase.
Specify the record size in the **Record** area the right.
Enable the **Contain** radio button to specify the size of a variable-length record.

f) Set the Recording Mode check box to include the **RECORDING MODE** phrase.

g) Set the Value of File-ID check box to include the **VALUE-OF-FILE ID** phrase.

4. Click **OK** to save the specified options.

ADDING A COMMENT

➲ **To add a comment to a generated FD file:**

1. Click the **Comment** button. The **Comment** dialog box appears.

2. Enter a comment and click **OK** when finished.

ADDING A DATA ITEM

➲ **To add a Data Item:**

1. Select the **Add Item** tab to add a data item, a drop-down list appears. Select a level item from the list, the data item appears in the **Data Item Definition** dialog box (Selecting the Level 1 data item will add a second Level 1 data item under it).

2. To add a data item above another data item highlight the desired data item and click the **Add Item Before** icon, the new data item appears above the highlighted data item in the **Data Item Definition** dialog box.

3. To add a data item after another data item highlight the desired data item and click the **Add** icon, the new data item appears below the highlighted data item in the **Data Item Definition** list dialog box.

4. To add a sub-item, highlight a parent data item, and click the **Add Sub-Item** icon, the sub –item appears below the parent data item in the **Data Item Definition** dialog box.

CHANGING A DATA ITEM LEVEL

➲ **To change the Level of a Data Item:**

1. Select a data item in the **Data Item Definition** dialog box; the **Data Item** is highlighted. (The first Level 01 cannot be changed).
2. Double-click the level number in the **Level** column; the number is no longer grayed-out and is made accessible.
3. Type a new level number and click anywhere outside of the **Level** column, the data item level changes.

RENAMING A DATA ITEM

➲ **To rename a Data Item:**

1. Select a data item in the **Data Item Definition** dialog box; the **Data Item** is highlighted.
2. Double-click the data item name in the **Field Name** column; the **Field Name** column is no longer grayed-out and is made accessible.
3. Type a new data item name and click anywhere outside of the **Field Name** column, the data item name changes.

MODIFYING A PIC SIZE

➲ **To modify a PIC size:**

1. Select a data item in the **Data Item Definition** dialog box; the **Data Item** is highlighted.
2. Double-click a **PIC** in the **PIC** column; the **PIC** is no longer grayed-out and is made accessible.
3. Type a new **PIC** size and click anywhere outside of the **PIC** column, the **PIC** changes.

SPECIFYING USAGE OPTIONS

➲ **To specify Usage options:**

1. Select a data item in the **Data Item Definition** dialog box; the data item is highlighted.
2. Double-click the **Usage** column in the data item row, a drop-down list

appears.

3. Select an option from the **Usage** drop-down list. The assigned **Usage** option appears in the **Usage** column.

SETTING A DATA ITEM VALUE

➲ **To set a Data Item Value:**

1. Select a data item in the **Data Item Definition** dialog box; the **Data Item** is highlighted.
2. Double-click the **Value** column in the **Data Item** row; the **Value** column is no longer grayed-out and is made accessible.
3. Enter a value and click anywhere outside of the **Value** column, the value will be set and appear in the **Value** column.

REDEFINES Clause

A REDEFINES clause creates multiple definitions for the same field.

REDEFINING A DATA ITEM

➲ **To Redefine a data item:**

1. Select a data item in the **Data Item Definition** dialog box; the **Data Item** is highlighted.
2. Double-click the **Redefine** column in the data item row, a list appears displaying the data item that appears directly above the selected data item corresponding with the level. If no data item of the same level exists directly above the selected data item within the same context then no items will be listed.
3. Select the data item from the **Redefine** list, click anywhere outside of the **Redefine** column, the data item is will be redefined, and appear in the **Redefine** list.

OCCURS Clauses

The OCCURS clause allows a field to be defined as many times as the user wants.

SETTING OCCURS SYNTAX

➲ **To set Occurs Syntax:**

1. Select a data item in the **Data Item Definition** dialog box; the **Data Item** is highlighted.
2. Double-click the **Occurs** column in the data item row; the **Occurs** column is no longer grayed-out and is made accessible.
3. Select a data item from the **Occurs** list box. If the list box is empty, click the **Browse** button, the **Occurs Syntax** dialog box appears.
4. Select the **Occurs Clause** check box (), in the **Occurs Syntax** dialog box; the fields are no longer grayed-out and are made accessible.
5. Set the desired **Occurs Syntax** settings and click **OK**, the **Occurs Syntax** dialog box closes.
6. Click anywhere outside of the **Occurs** column in the **File Designer**, the options will be set and appear in the **Occurs** column.

SETTING THE FIELD ADVANCE OPTIONS

➲ **To set Field Advance options:**

1. Select a data item in the **Data Item Definition** dialog box; the **Data Item** is highlighted.
2. Double-click the last column in the data item row. The **Field Advance** dialog box appears.
3. Set the **Global** check box to include the **IS GLOBAL** phrase.
4. Select a name from the **Special Names** drop down list for the **IS SPECIAL-NAMES** phrase.
5. Select a sign position from the **Sign** drop down list for the **SIGN IS** phrase.
6. Set the **Justified right** check box to include the **JUSTIFY RIGHT** phrase.
7. Set the **Blank when zero** check box to include the BLANK WHEN ZERO phrase.
8. The Copy File section of the dialog box is active only if the selected item is part of a linked COPY file. From that section users can:
   a) Set the Convert Link to Import to convert a linked COPY file to an imported COPY file.

9. Enter any desired text comment in the **Comment** text box.
10. Click **OK**. The **Field Advance** dialog box is closed, and the options are set.

DELETING A DATA ITEM

➲ **To delete a Data Item:**

1. Select a data item in the **Data Item Definition** dialog box. The **Data Item** is highlighted.
2. Click the **Delete** icon. The data item is deleted.
3. Alternatively, all data items can be deleted by clicking the **Delete All** icon.

GENERATING AN FD FILE

Once all the variables have been specified for the file the file must be generated before the file can be viewed.

NOTE *It is ness to regenerate a file after it has been altered. A file that has been altered and that needs to be regenerated will be marked with an * in the Project Workspace.*

➲ **To generate an FD file:**

1. Select the file that is to be generated from the **Data View** in the **Project Workspace**. The **File Designer** will appear in the **Canvas Area**.
2. Click the **Definition** tab. The **Definition** dialog box appears.
3. Right click anywhere in the **Definition** dialog box of the **File Designer**. A drop down list appears.
4. Select **Generate FD/SL** from the drop down list. Messages will appear in the **Build** portion of the **Output Window** detailing the status of file generation.

VIEWING AN FD FILE

After all the file variables have been set and the file has been generated, the file can then be viewed in the **Code Editor** of DCIBench.

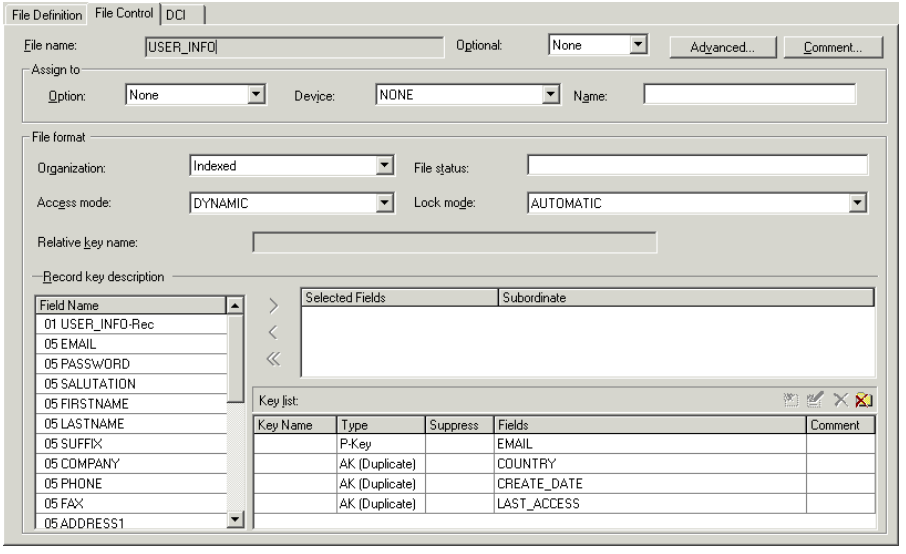
NOTE *It is ness to regenerate a file after it has been altered. A file that has been altered and that needs to be regenerated will be marked with an * in the Project Workspace.*

➲ **To view an FD file:**

1. Select the file that is to be viewed from the **Data View** in the **Project Workspace**. The **File Designer** will appear in the **Canvas Area**.
2. Click the **Definition** tab. The **Definition** dialog box appears.
3. Right click anywhere in the **Definition** dialog box of the **File Designer**. A drop down list appears.
4. Select **View *.fd** from the drop down list. The file will appear in the **Code Editor** in the **Canvas Area**.

4.3 File Control

Selections made and data entered on the File Control screen are combined to construct a SELECT statement that is generated into the associated SL COPY file.



Setting File Controls

The File Designer can be used to set FD file controls. The physical data can be assigned to a device, file organization can be specified, and the physical filename associated with the logical filename on the disk can be assigned. Ensure that the File Control page is displayed and select any of the options that follow.

ASSIGNING PHYSICAL DATA TO A DEVICE

DCIBench supports the assigning of physical data to a device. The device can be of an external origin or a dynamic device (a single disk reference spanning more than one physical disk volume). The file organization format chosen will have effect on the type of device that can be chosen.

➲ **To assign Physical Data to a Device:**

1. In the **File Control** section of the **File Designer**, select a device type from the **Device** drop-down list box.
2. In the **Name** text box, enter a filename enclosed in quotes (“”) and add a suffix, for example, “advisor.dat" (a name without quotes will be treated as a variable).

SPECIFYING A FILE FORMAT

DCIBench supports six file organization formats, None, record sequential, line sequential, relative, indexed and sort supported by COBOL.

Sequential files can only be accessed sequentially, that is, in the same order as they were originally written to the file. New records are always added to the end of the file.

Relative files identify each record in a file by their ordinal position in the file. This allows the file to be accessed sequentially, randomly or dynamically (the file is accessed both sequentially and randomly).

An indexed file is a file in which each record includes a primary key. To distinguish one record from another, the value of the primary key must be unique for each record. Records can then be accessed randomly by specifying the value of the record's primary key. Indexed file records can also be accessed sequentially and dynamically.

➲ **To specify a file format:**

1. Select a file format from the **Organization** combo box located in the **File Format** section. The selected file format appears in the drop-down list box.
   a) If the **Relative** format was selected enter a name in the **Relative key name** text box. The **Relative key name** field becomes active only once the access mode for the file has been selected
   b) If the **Indexed** form was selected the **Record key name** section of the dialog box becomes active.

SETTING AN ACCESS MODE

Sequential, random and, dynamic are the three access modes that are supported.

In the SEQUENTIAL access mode records are accessed in the same order that they were written to the file.

In the RANDOM access mode, records are accessed according to the value of the

record key.

In the DYNAMIC access mode records are accessed by using the appropriate I/O statements to switch between SEQUENTIAL and RANDOM access.

➲ **To set an Access Mode:**

1. Select an access mode from the **Access Mode** combo box in the **File Designer**. The selected access mode appears in the drop-down list box.

SETTING A LOCK MODE

When sharing data in a multi-user environment, you need to prevent more than one user from changing the same data at the same time. Locking files and records enables FD/SL's in a multi-user environment to share common files while maintaining data integrity.

➲ **To set a Lock Mode:**

1. Select a lock mode from the **Lock Mode** combo box in the **File Designer**. The selected lock mode appears in the drop-down list box.

SETTING ADVANCED OPTIONS

➲ **To set advanced options:**

1. Click the **Advanced** button in the **File Designer**. The **Advanced Options** dialog box appears displaying the advanced options for the current format.
2. After selecting the desired advanced options, click **OK**. The **Advanced Options** dialog box closes.

SETTING FILE STATUS

File status is a two-byte code that indicates how a file operation was completed; either successfully, or with some form of error. If an error occurs, file status indicates the cause of the error.

If you have a file status data-item defined for a file, after every input/output operation on the file (OPEN, CLOSE, READ, WRITE, REWRITE, START and DELETE) the run-time system updates it to indicate how the operation completed.

ADDING A FILE CONTROL COMMENT

Comments added to a file will appear in the generated SL file.

➲ **To add a File Control comment:**

1. Click the**Comment** button and enter the desired text in the **Comment** box that will be generated in the *filename.sl* file.

Assigning Keys

The **File Designer** can be used to assign data items as keys in the physical description of an index file and to rename, insert comments, or delete those keys.
The different key types (primary key, alternate keys, and alternate unique key) can be set when more than one key has been assigned using the File Designer. The first key specified will become the primary key by default, and only one primary key can exist for each FD/SL file. DCIBench will assign a default name to a split key.

ASSIGNING A KEY

➲ **To assign a Key:**

1. Perform step 1, 2 or 3 and proceed to step 4, or proceed directly to step 5. Select a data item in the **Field Descriptions** list. The data item is highlighted.
2. Shift+Click the desired data items in the **Field Descriptions** list to select a block of data items. The data items are highlighted.
3. Crl+Click the desired data items in the **Field Descriptions** list to select non-contiguous data items. The data items are highlighted.
4. Click the **Add** icon; the data item(s) appear(s) in the **Selected Fields** list.
5. Double-click the subordinate column in the **Selected Fields** to make a subordinate field name.
6. Click the **Add** icon (); a key is added to the **Key List**.

RENAMING A KEY

➲ **To rename a Key:**

1. Select the key to be renamed from the **Key List**.
2. Double-click on the **Key Name** column; the **Key Name** column is no longer

grayed-out and is made accessible.

3. Enter a key name, click anywhere outside of the **Key Name** column, the key name is assigned, and appears in the **Key Name** column.

SETTING A KEY TYPE

➲ **To set a Key Type:**

1. Select a **Key** from the **Key List** and double-click the **Type** column, a drop-down list box appears.
2. Select **AK** (**Unique**) to set the key to be a unique **Alternate Key**.
3. Select **AK** (**Duplicate**) to set the key to be a duplicated **Alternate Key**.
4. Click anywhere outside of the **Type** column in the **Key List**, the key type is set and appears in the **Key List**.

SUPPRESSING A KEY

➲ **To set a suppress phrase:**

1. Select a **Key** from the **Key List** and double-click the **Suppress** column, a drop-down list box appears.
2. Select **Zero** or **Space** to suppress the key.

ADDING A COMMENT

➲ **To add a Comment to a key:**

1. Select a **Key** from the **Key List**
2. Double-click the **Comment** column. A large button appears.
3. Click the button, the **Comment** dialog box appears.
4. Enter the desired text comments in the **Comment** dialog box.
5. Click **OK**, the comment is set.

DELETING KEYS

A single key or all of the keys can be deleted at the same time. When deleting a key, the data items are also removed from the Selected Fields box.

➲ **To delete key(s):**

1. Select the key to be deleted from the **Key List**; the key is highlighted.
2. Click the **Delete** icon above the **Key List** dialog box; the key is deleted.
3. To delete all keys click the **Delete All** icon above the **Key List** dialog box, all of the keys are deleted.

GENERATING AN SL FILE

Once all the variables have been specified for the file the file must be generated before the file can be viewed.

NOTE *It is ness to regenerate a file after it has been altered. A file that has been altered and that needs to be regenerated will be marked with an * in the Project Workspace.*

➲ **To generate an SL file:**

1. Select the file that is to be generated from the **Data View** in the **Project Workspace**. The **File Designer** will appear in the **Canvas Area**.
2. Right click anywhere in the **File Control** dialog box of the **File Designer**. A drop down list appears.
3. Select **Generate FD/SL** from the drop down list. Messages will appear in the **Build** portion of the **Output Window** detailing the status of file generation.

VIEWING AN SL FILE

After all the file variables have been set and the file has been generated, the file can then be viewed in the **Code Editor** of DCIBench.

NOTE *It is ness to regenerate a file after it has been altered. A file that has been altered and that needs to be regenerated will be marked with an * in the Project Workspace.*

➲ **To view an SL file:**

1. Select the file that is to be viewed from the **Data View** in the **Project Workspace**. The **File Designer** will appear in the **Canvas Area**.
2. Right click anywhere in the **File Control** dialog box of the **File Designer**. A drop down list appears.
3. Select **View *.sl** from the drop down list. The file will appear in the **Code**

Editor in the Canvas Area.

4.4 DCI Functions

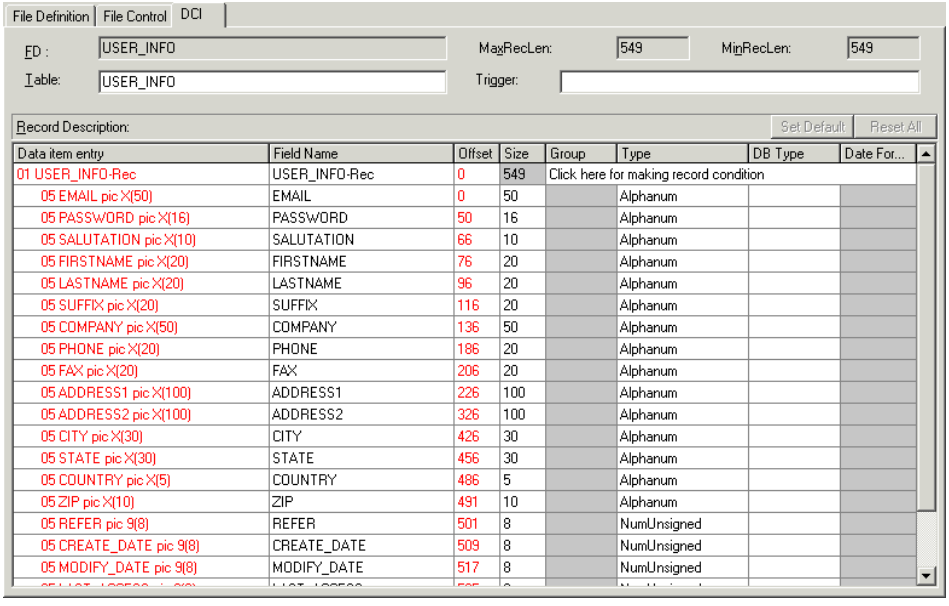


Table Names

By default the table name is the same as the FD file. The table name can be changed in the table field. The table name is case insensitive. The character limit for a table name is 32.

Field Names

By default the field names are the same as the corresponding entry in the Definition dialog box. The field name can be changed in the table field. The field name is case sensitive. The character limit for a field name is 32.

GROUP

The GROUP directive assigns a group of items to a single column in the DBMaker table. This field is disabled if the active data item is a leaf.

➲ **To group items:**

1. Select the file that is to be edited from the **Data View** in the **Project Workspace**. The **File Designer** will appear in the **Canvas Area**.
2. Click the **DCI** tab. The **DCI** dialog box appears.
3. Double click the **Group** field in the **Record Description**. A drop down list appears.
4. Select **TRUE** from the drop down list.

Setting Character Types

Character types for the data can be set in the Types field of the DCI page. The following table outlines the options available to users. The table also shows the corresponding COBOL data type. DCIBench assigns a default character type but users are able to change the default character type if it is unsuitable.

"TYPE" VALUE	CORRESPONDING COBOL TYPE
NumUnsigned	pic 9(x).
NumSignSep	pic s9(x) sign is trailing separate
NumSigned	pic s9(x) or s9(x) sign is trailing
NumSepLead	pic s9(x) sign is leading separate
NumLeading	pic s9(x) sign is leading
CompSigned	pic s9(x) comp-2, signed-int , signed-long
CompUnsigned	pic 9(x) comp-2
PackedPositive	pic 9(x) comp-3
PackedSigned	pic s9(x) comp-3
PackedUnsigned	pic 9(x) comp-6 unsigned-int unsigned-long
BinarySigned	pic 9(x) comp-1 pic s9(x) comp-1 pic s9(4) comp-4
BinaryUnsigned	pic 9(x) comp-4
NativeSigned	pic s9(x) comp-5, signed-short

NativeUnsigned	pic 9(x) comp-5, unsigned-short
Float	float , double
Alphanum	pic x(x)

4.5 Using Triggers

COBOL Triggers are very useful and powerful features of DCI. COBOL triggers can be used to automatically execute predefined COBOL program in response to specific I/O events, regardless of which user or application program generated them. COBOL triggers can be used to:

- Implement business rules.
- Create an audit trail for COBOL activities.
- Derive additional values from existing data.
- Replicate data across multiple files.
- Perform security authorization procedures.
- Control data integrity.
- Define unconventional integrity constraints.

Use the following directives to define a COBOL trigger in order to specify the COBOL program name to be called when an I/O event occurs.

Setting Database Column Types

➲ **To set the database column data type:**

1. Select the file that is to be edited from the **Data View** in the **Project Workspace**. The **File Designer** will appear in the **Canvas Area**.
2. Click the **DCI** tab. The **DCI** dialog box appears.
3. Double click the **DB Type** field in the **Record Description** area of the **DCI** dialog box. A drop down list appears.
4. Select the database column type from the drop down list. If the data type selected was **date** the **Date Format** field becomes active. (Continue to step a to set the date format.)

a) Double click the **Date Format** field in the **Record Description** area of the **DCI** dialog box.

b) Select a date format type from the drop down list or enter a date type in the **Date Format** field.

Setting Conditional Data

Users are able to set conditional data which allow the user choose which table will retrived at runtime. When setting conditions users must keep the following in mind:

- When using the **AND/OR** operators users must follow the operators with a **LEAF** statement.

➲ **Example : To set the following conditional statement "A>2 AND B<3":**

NOTE *The letters A and B represent columns on a table.*

1. Double click **Click here for making record condition**. The **Condition** button appears.

2. Click the **Condition** button. The **Condition Builder** diaolg box appears.

3. Click the **And** button. "**and**" appears in the **Condition List**.

4. Click the **Leaf** button, "**leaf**" appears in the **Condition List** beneath "**and**".

5. Double click in the **Left Operand** field and select **A** from the drop down list.

6. Double click the **Operator** field and select ">" from the drop down list.

7. Double click the **Right Operand** field and enter **2** in the active entry field.

8. Click the **Leaf** button again. "**leaf**" appears in the **Condition List** beneath the first "**leaf**" statement.

9. Double click in the **Left Operand** field and select **B** from the drop down list.

10. Double click the **Operator** field and select "<" from the drop down list.

11. Double click the **Right Operand** field and enter **3** in the active entry field.

12. The **Preview** field shows the finished expression.

13. Click **OK**. The expression appears in the DCI page of the File Designer.

Offset

The Offset column of the DCI page is a read only column. This column denotes the

offset of each data item in a record.

Size

The Size column of the DCI page specifies the length of a data item in a record. DCIBench will assign a value for this column but users are able to edit the value if the default value is unsuitable.

Closing FD/SL Files and the File Designer

When many FD/SL files are open, multiple instances of the File Designer are also opened. Closing FD/SL files will also close the corresponding instance of the File Designer and release memory back to the system.

➲ **To close an FD/SL file and the corresponding instance of File Designer:**

1. Right-click an opened **FD/SL** file from the **Project Workspace**; a pop-up menu appears.
2. Select **Close FD/SL**. If any unsaved components exist a warning message will appear with the file type and <*file name*> information. At this point three options are available.
   - **a)** Click **Yes** to save the changes. The changes will be saved and **File Designer and** the components will be closed.
   - **b)** Click **No** to not save the changes. The changes will not be saved and **File Designer** and the components will be closed.
   - **c)** Click **Cancel** to cancel the saving of the FD/SL file. The **File Designer** and the components will remain open.

Closing the File Designer

The File Designer can be closed to release memory back to the system.

➲ **To close the File Designer:**

1. Select **File** from the **Menu Bar**, a drop-down menu appears.
2. Select **Close**, the changes are saved and the **File Designer** is closed

5 Extended XML

The file containing a database table description must have the same name of the database table plus the ".xml" extension. It should be compliant with the following DTD (Document Type Description):

```
<!ELEMENT table (key+, conditions*, field+, trigger?)>
<!ATTLIST table
          name CDATA #REQUIRED
          type (idx|rel|seq) #REQUIRED
          maxRecLen CDATA #REQUIRED
          minRecLen CDATA #IMPLIED
          keyCount CDATA #REQUIRED>

<!ELEMENT key (segment+,part+)>
<!ATTLIST key
          segCount CDATA #REQUIRED
          duplicate (true|false) #REQUIRED>

<!ELEMENT segment EMPTY>
<!ATTLIST segment
          offset CDATA #REQUIRED
          size CDATA #REQUIRED>

<!ELEMENT part EMPTY>
<!ATTLIST part
          name CDATA #REQUIRED>

<!ELEMENT conditions (condition+, and*, or*)>
```

```
<!ELEMENT condition (#PCDATA)>
<!ATTLIST condition
          number CDATA #REQUIRED
          name CDATA #REQUIRED
          op (eq|gt|lt|ge|le|ne|default) #REQUIRED>

<!ELEMENT and (condition*, and*, or*)>
<!ATTLIST and
          number CDATA #REQUIRED>

<!ELEMENT or (condition*, and*, or*)>
<!ATTLIST or
          number CDATA #REQUIRED>

<!ELEMENT field (field*,occurs*)>
<!ATTLIST field
          name CDATA #REQUIRED
          offset CDATA #REQUIRED
          size CDATA #REQUIRED
          type (NumUnsigned|NumSignSep|NumSigned|NumSepLead|
                NumLeading|CompSigned|CompUnsigned|
                PackedPositive|PackedSigned|
                PackedUnsigned|BinarySigned|BinaryUnsigned|
                NativeSigned|NativeUnsigned|Float|Alphanum) #REQUIRED
          digits CDATA #IMPLIED
          scale CDATA #IMPLIED
          condition CDATA #IMPLIED
          dbtype (date|binary|longchar|longbinary|serial) #IMPLIED
          format CDATA #IMPLIED>

<!ELEMENT occurs (field+,occurs*)>
<!ATTLIST occurs
          size CDATA #REQUIRED
          number CDATA #REQUIRED>
```

5.1 Tag Descriptions

The descriptions for various XML tags found in DCIBench are outlined in this

chapter.

<table> Tag

The <table> tag comprises the description of a database table. It consists of five attributes; name, type, maxRecLen, minRecLen and, keyCount. All attributes are mandatory.

```
<!ELEMENT table (key+, conditions*, field+, trigger?)>
<!ATTLIST table
          name CDATA #REQUIRED
          type (idx|rel|seq) #REQUIRED
          maxRecLen CDATA #REQUIRED
          minRecLen CDATA #IMPLIED
          keyCount CDATA #REQUIRED>
```

ATTRIBUTE	COMMENTS
name	This attribute specifies the name of the table. If **DCIBench** is used, this attribute is set in the **Table** field of the **DCI** section of the **File Designer**.
type	This attribute specifies the type of table. There are three types of tables that can be specified; idx (indexed), rel (relative) and, seq (sequential). If **DCIBench** is used, these values are set in the **Organization** combo box of the **File Control** section of the **File Designer**.
maxRecLen	This attribute indicates the maximum size of a record.
minRecLen	This attribute indicates the minimum size of a record. If no value is specified this value will assume the value of maxRecLen.
keyCount	This attribute specifies the number of declared keys in a table. This number much match the number of keys declared in the body of the program. If **DCIBench** is used, the value for this attribute can be checked in the **Key list** field of the **File Control** section of the **File Designer**.

<key>Tag

This tag must appear in the body of the <table> tag. It must appear as many times as specified in the keyCount attribute of the <table> tag. This tag has two attributes segCount and duplicate. All attributes are mandatory.

```
<!ELEMENT key (segment+,part+)>
<!ATTLIST key
          segCount CDATA #REQUIRED
          duplicate (true|false) #REQUIRED>
```

Attribute	Comments
segCount	This attribute specifies the number of segments that comprise a key
duplicate	This attribute specifies if a key is unique or a duplicate. The only values accepted for this attribute are true or false.

Tag

This tag must appear in the body of the <key> tag. It must appear as many times as specified in the segCount attribute of the <key> tag. It has two attributes and both are mandatory.

```
<!ELEMENT segment EMPTY>
<!ATTLIST segment
          offset CDATA #REQUIRED
          size CDATA #REQUIRED>
```

Attribute	Comments
offset	This attribute specifies the offset of a segment in a record
size	This attribute specifies the size of a segment in a record.

<part> Tag

This tag must appear in the body of the <key> tag. It can appear as many times as necessary. Each tag represents a field name that composes the key. This tag has a single attribute, which is mandatroy:

```
<!ELEMENT part EMPTY>
<!ATTLIST part
          name CDATA #REQUIRED>
```

Attribute	Comments
name	This attribute specifies the name of a field.

<conditions> Tag

This tag must appear in the body of the <table> tag. It must appear only once if the table has different record formats. This tag has no attributes but in it's body must contain some conditions in form of tags <condition>, <and> and <or>. Each condition is identified by a number. At runtime, every field that has a condition number exists only when the corresponding condition is true. If DCIBench is used this value is set in the Record Description field in the DCI page of the File Designer.

```
<!ELEMENT conditions (condition+, and*, or*)>
```

<condition> Tag

This tag appears in the body of one of the following tags: <conditions>, <and>, <or>. It represents a logical expression and has 3 attributes. All attributes are mandatory.

```
<!ELEMENT condition (#PCDATA)>
<!ATTLIST condition
          number CDATA #REQUIRED
          name CDATA #REQUIRED
          op (eq|gt|lt|ge|le|ne|default) #REQUIRED>

<!ELEMENT and (condition*, and*, or*)>
<!ATTLIST and
          number CDATA #REQUIRED>

<!ELEMENT or (condition*, and*, or*)>
<!ATTLIST or
          number CDATA #REQUIRED>
```

Attribute	Comments
number	This attribute specifies the offset of a segment in a record
name	This attribute specifies the size of a segment in a record.
op	This attribute specifies the operator to use in stated comparisons: The following values are accepted: eq | gt | lt | ge | le | ne | default

"OP" VALUE	COMMENTS
eq	The specified operator is "equal to".
gt	The specified operator is 'greater than".
lt	The specified operator is "lesser than".
ge	The specified operator is "greater or equal to".
le	The specified operator is "lesser or equal to".
ne	The specified operator is "not equal".
default	The default condition applies when no other condition is true.

The value to compare with the field content is contained as characters in the body of the tag. If this value contains characters reserved for XML, in particular `< or &`, they must be escaped (`<` and `&`).

<field> Tag

The <field> tag must appear in the body of a table field. This tag comprises the description of a database field. There are nine attributes that comprise this tag.

```
<!ELEMENT field (field*,occurs*)>
<!ATTLIST field
          name CDATA #REQUIRED
          offset CDATA #REQUIRED
          size CDATA #REQUIRED
          type (NumUnsigned|NumSignSep|NumSigned|NumSepLead|
                NumLeading|CompSigned|CompUnsigned|
                PackedPositive|PackedSigned|
                PackedUnsigned|BinarySigned|BinaryUnsigned|
                NativeSigned|NativeUnsigned|Float|Alphanum) #REQUIRED
          digits CDATA #IMPLIED
          scale CDATA #IMPLIED
          condition CDATA #IMPLIED
          dbtype (date|binary|longchar|longbinary|serial) #IMPLIED
          format CDATA #IMPLIED>
```

ATTRIBUTE	DCI PAGE FIELD	COMMENTS
name	Field Name	This attribute specifies the name of a field in a table.

offset	**Offset**	This attribute specifies the offset of a field
size	**Size**	This attribute specifies the size of a field.
type	**Type**	This attribute specifies the data type of a field. The following types are valid: NumUnsigned | NumSignSep | NumSigned | NumSepLead | NumLeading | CompSigned | CompUnsigned | PackedPositive | PackedSigned | PackedUnsigned | BinarySigned | BinaryUnsigned | NativeSigned | NativeUnsigned | Float | Alphanum
digits		For numeric fields it specifies the number of digits in a field. For non-numeric fields it specifies the size of a field.
scale		For numeric fields it specifies the scale of a field, expressed a power of 10. For non-numeric fields this value is set to 0.
condition	**Click here for making record condition**	This attribute specifies if a condition acts upon this field
dbtype	**DB Type**	This attribute specifies the data type of a segment in a field.
format	**Data Format**	This attribute specifies the size of a segment in a record.

"TYPE" VALUE	CORRESPONDING COBOL TYPE
NumUnsigned	pic 9(x).
NumSignSep	pic s9(x) sign is trailing separate
NumSigned	pic s9(x) or s9(x) sign is trailing
NumSepLead	pic s9(x) sign is leading separate
NumLeading	pic s9(x) sign is leading
CompSigned	pic s9(x) comp-2, signed-int , signed-long
CompUnsigned	pic 9(x) comp-2

PackedPositive	pic 9(x) comp-3
PackedSigned	pic s9(x) comp-3
PackedUnsigned	pic 9(x) comp-6 unsigned-int unsigned-long
BinarySigned	pic 9(x) comp-1 pic s9(x) comp-1 pic s9(4) comp-4
BinaryUnsigned	pic 9(x) comp-4
NativeSigned	pic s9(x) comp-5, signed-short
NativeUnsigned	pic 9(x) comp-5, unsigned-short
Float	float , double
Alphanum	pic x(x)

6 Menu Bar Reference

6.1 File Command Menu

The File Menu contains commands that perform basic operations on files and workspaces in the DCIBench environment.

New

The **New** option in the **File Menu** faciliates the creation and importing of new projects, FD/SL files and templates. Clicking **New** in the **File Menu** opens the **New** dialog box. From the **New** dialog box the user has a choice of three tabs; the **Project**, **FD/SL** and **File** tab. The options available for each page is detailed in the tables below.

THE PROJECT PAGE

The **New** page in the **New** dialog box allows users to set options for creating a new project.

Option	Comments
Blank	This option allows users to open a blank project as a new project.
Project Wizard	This option allows users to utilize the project wizard when creating a new project
Project name	This field contains the name of the project being created. If users do not set a name in this field DCIBench will assign a name for the project.
Location	This field contains the file path for the project.
FD path	This field contains the file path for the FD/SL files for the project.
XML path	This field contains the file path for the XML files for the project.
Open in new workspace	Set this option to open new project in a new workspace.
Add to current workspace	Set this option to open new project in the active workspace.
OK	Click OK to save the information for the new project.
Cancel	Click Cancel to exit the Project page without saving.

The FD/SL Page

The FD/SL page of New dialog box allows users to set options when creating or importing an FD/SL file to a project. The table below lists the options available in the FD/SL page of the New dialog box.

Option	Comments
Blank	This option allows users to open a blank project as a new project.
Import from Files	This option allows users to import FD/SL files from a user defined location.
Import from Database	This option allows users to import FD/SL files from a database.
FD/SL name	This field contains the name for the FD/SL file being created or imported.
Unique prefix	This field contains the unique prefix for the FD/SL being created or imported. The default value value is FD*x*, where *x* is a sequential number.
File name	This field contains the file name for the files being created or imported. All FD/SL files end with the ".xlt" extension.
Location	This field contains the file path for the project.
Add to existing project	This option allows the user to add the new or imported file to any active project in DCIBench.
OK	Click **OK** to save the information for the new project.
Cancel	Click **Cancel** to exit the Project page without saving.

The File Page

The **File** page in the **New** dialog box allows users to set options for templates (or source code) for projects in DCIBench. All templates available to the user are displayed in the display window of the **File** page. The following page lists the options available in the File page.

Option	Comments
Blank Text	This option allows users to open a blank template.
Source Template	This option allows users to open the source template provided with DCIBench.
File name	This field contains the file name for the files being created or imported.
Location	Specifiy the full directory path to the location in which the new file is to be saved. The default directory path is the FD folder in the extisting project directory. Click the button to the right of the **Location** field to browse for a directory path.

OK	Click **OK** to save the information for the new project.
Cancel	Click **Cancel** to exit the **Project** page without saving.

Open

The **Open** option in the **File Menu** allows users to open an existing file. Selecting **Open** from the **File Menu** opens the **Open** dialog box. The options in the dialog box are listed in the table below.

OPTION	COMMENTS
Look in	This option allows users to locate and open the desired file.
File name	This field contains the file name for the files being opened.
Files of Type	This field allows users to select the type of file being opened.
Open	Click **Open** to open the selected file.
Cancel	Click **Cancel** to exit the **Open** dialog box without opening a file.

Close

Select **Close** from the **File Menu** to close a selected active file.

Open Workspace

The **Open Workspace** option in the **File Menu** allows users to open an existing workspace. Selecting **Open Workspace** from the **File Menu** opens the **Open Workspace** dialog box. The options in the dialog box are listed in the table below.

OPTION	COMMENTS
Look in	This option allows users to locate and open the desired workspace.
File name	This field contains the file name for the files being opened.
Files of Type	This field allows users to select the type of file being opened.
Open	Click **Open** to open the selected workspace.

Cancel	Click **Cancel** to exit the **Open** dialog box without opening a workspace.

Save Workspace

The **Save Workspace** option in the **File Menu** allows users to save the active workspace.

Close Workspace

Select **Close Workspace** from the **File Menu** to close a selected active workspace.

Save

Select **Save** option to save the current file. The name of the current file is displayed to the right of the Save option.

Save As

The **Save As** option in the **File Menu** allows users to open an existing workspace. Selecting **Save As** from the **File Menu** opens the **Save Data Layout As** dialog box. The options in the dialog box are listed in the table below.

OPTION	COMMENTS
Save in	This option allows users to save the data layout in a selected location.
File name	This field contains the file name for the files being saved.
Save as Type	This field allows users to select the type of file being saved.
Save	Click **Save** to save the selected data layout.
Cancel	Click **Cancel** to exit the **Save As** dialog box without saving a data layout.

Save All

Select **Save All** option to save all changes made to all open files.

Page Setup

The **Page Setup** options in the **File Menu** are used to set up a page before printing. Selecting this option will open the **Page Setup** dialog box.

OPTION	COMMENTS
Header	This option allows users to set the header options for a printed document. Click the Browse button next to the field for a list of options. **Full Path Filename** prints the full path and file name in the header. The code displayed in the Header field when this is selected is &U. **Filename** prints the file name in the header. The code displayed in the Header field when this is selected is &F. **Page Number** prints the page number in the header. The code displayed in the Header field when this is selected is &P. **Current Time** prints the time the document was printed in the header. The code displayed in the Header field when this is selected is &T. **Current Date** prints the date the document was printed in the header. The code displayed in the Header field when this is selected is &D. **Left Align** prints the header in a left alignment. The code displayed in the Header field when this is selected is &L. **Center** prints the header in a center alignment. The code displayed in the Header field when this is selected is &C. **Right Align** prints the header in a right alignment. The code displayed in the Header field when this is selected is &R.
Footer	This option allows users to set the footer options for a printed document. Click the Browse button next to the field for a list of options. **Full Path Filename** prints the full path and file name in

	the footer. The code displayed in the Footer field when this is selected is &U. **Filename** prints the file name in the footer. The code displayed in the Footer field when this is selected is &F. **Page Number** prints the page number in the footer. The code displayed in the Footer field when this is selected is &P. **Current Time** prints the time the document was printed in the footer. The code displayed in the Footer field when this is selected is &T. **Current Date** prints the date the document was printed in the footer. The code displayed in the Footer field when this is selected is &D. **Left Align** prints the footer in a left alignment. The code displayed in the Footer field when this is selected is &L. **Center** prints the footer in a center alignment. The code displayed in the Footer field when this is selected is &C. **Right Align** prints the footer in a right alignment. The code displayed in the Footer field when this is selected is &R.
Style	This field allows users to select the printing style for the document. Click the drop down box for a list of options. **Black and White** prints the document in black and white. **Color** prints the document in color. **Zebra** prints the document using alternating gray and white stripes.
Print line number	Set the **Print line number** check box to have the line numbers printed on the document.
Frame	This option allows users to set the frame type for the document. **None** prints no frame **Inner** prints an inner frame
Margins	This option allows users to set the margins for the document.

OK	Click **OK** to save the print set up information.
Cancel	Click **Cancel** to exit the **Page Setup** dialog box without saving.

Printer Setup

The **Printer Setup** option allows users to modify or view printer settings. Selecting **Printer Setup** from the **File Menu** opens the **Printer Setup** dialog box.

OPTION	COMMENTS
Name	This option allows users to select the of the printer to be set up
Properties	This option allows users to set the options for the selected printer.
Paper	This area allows users to select the paper size and the source.
Orientation	Allows users to select the orientation (landscape or portrait) of the paper.
Network	This option allows users to select a printer from a network location.
OK	Click **OK** to save the printer set up information.
Cancel	Click **Cancel** to exit the **Printer Setup** dialog box without saving.

Print Preview

Users can preview documents before printing by selecting the **Print Preview** option in the **File Menu**. The **Print Preview** dialog box opens when **Print Preview** is selected from the **File Menu**. The table below lists the options available to the user in the **Print Preview** dialog box.

Options	Action
Print	Clicking this button sends the active document to a printer.
Next Page	Clicking this button allows the user to advance to the next page in the active document.
Prev Page	Clicking this button allows the user to retreat to the previous page in the active document.
Two Page	Clicking this button allows the user to view to pages of the active document simultaneously.
One Page	Clicking this button allows the user to view a single page of the active document. This button is only active when the user has clicked the **Two Page** button and is viewing two pages from the active document.
Zoom In	Clicking this button allows the user to zoom in for a closer look at the active document.
Zoom Out	Clicking this button allows the user to zoom out for a broader look at the active document.
Close	Clicking this button closes the **Print Preview** page.

Print

Selecting the **Print** option from the **File Menu** sends the open document to the printer specified in the **Printer Setup** option.

Recent Files

The most recently opened files are are listed in the **File Menu**. To open a file simply click it in the **File Menu**.

Recent Workspaces

The most recently opened workspaces are are listed in the **File Menu**. To open a recent workspace simply click it in the **Recent Workspaces** submenu.

Exit

Selecting **Exit** from the **File Menu** shuts down DCIBench. State information is

saved and all files are closed before exiting.

6.2 Edit Command Menu

The Edit File Menu contains options for finding and replacing text, bookmark options and editting functions.

Undo

The **Undo** option reverses recent editing actions.

Redo

The **Redo** option reverses recent undo operations.

Cut

The **Cut** option removes the selected item and places it on the clipboard.

Copy

The **Copy** option copies the selected item and places it on the clipboard.

Paste

The **Paste** option places a selection that has been cut or copied to the clipboard into the active file.

Delete

The **Delete** option removes the selected item.

Select All

The **Select All** option selects all the elements in the active Code Editor window.

Find

The **Find** option allows users to find text strings in the active Code Editor window. Selecting **Find** from the **Edit Menu** opens the **Find** dialog box. The table below lists the options available in the **Find** dialog box.

OPTIONS	ACTION
Find what	Enter the text string to be search for in the **Find what** field.
Match case	Set the **Match case** check box to find the exact specified text string.
Regular expression	Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.
Wrap around search	Set the **Wrap around search** check box to have the search start from the beginning of the document after the seach has reached the end of the document.
Ignore `-' and `_'	Set the **Ignore `-' and `_'** check box to direct the search operation to ignore hyphens and underscores.
Direction	Select the desired direction of the search using the **Up** and **Down** radio buttons in the **Direction** section of the dialog box.
Find Next	Click the **Find Next** button to search for the desired text string. Click the **Find Next** button again to find the next occurrence of the desired text string.
Mark All	Clicking the **Mark All** button will mark each line of text with the desired text string,in the Code Editor, with a bookmark.
Find All	Clicking the **Find All** button will direct the search operation to find all occurences of the desired text. The results of the search will be displayed in the **Find in Files** pane of the **Output Window**.
Cancel	Clicking this button closes the **Find** dialog box.

Find Next

The **Find Next** option advances the user to the next occurrence of the selected item in the active document.

Find in Files

The **Find in Files** option allows the user to locate text strings in files stored on drives.

Options	Action
Find what	Enter the text string to be search for in the **Find what** field.
File types	Select the type of file to be searched in the **File types** drop down list.
Match case	Set the **Match case** check box to find the exact specified text string.
Regular expression	Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.
Where	Select the **Search in workspace** radio button to search for the text string in a file that is in DCIBench. Select the **Search in directories** radio button to search for the text string in a specific directory. The **Search directories** options section of the dialog box becomes active.
Look in	Select the directory to be searched in the **Look in** field. Or click the **Browse** button for further search options.
Include subdirectories	Set the **Include subdirectories** check box to include the subdirectories in the search.
Find	Click the **Find** button to search for the desired text string. The results of the search are displayed in the **Find in Files** pane of the **Output Window**.
Cancel	Clicking this button closes the **Find in Files** dialog box.

Replace

The **Replace** option allows the user to replace items in the text with other items. Selecting **Replace** from the **Edit Menu** opens the **Replace** dialog box. The table below shows the list of options in the dialog box.

OPTIONS	ACTION
Find what	Enter the text string to be search for in the **Find what** field.
Replace with	Enter the replacement text string in the **Replace with** field that is to replace the text in the **Find what** field.
Match case	Set the **Match case** check box to find the exact specified text string.
Regular expression	Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.
Wrap around search	Set the **Wrap around search** check box to have the search start from the beginning of the document after the seach has reached the end of the document.
Ignore `-' and `_'	Set the **Ignore `-' and `_'** check box to direct the search operation to ignore hyphens and underscores.
Direction	Select the desired direction of the search using the **Up** and **Down** radio buttons in the **Direction** section of the dialog box.
Find Next	Click the **Find Next** button to search for the desired text string. Click the **Find Next** button again to find the next occurrence of the desired text string.
Replace	Click **Replace** to replace the text in the **Find what** field with the text in the **Replace with** field.
Replace All	Click **Replace All** to replace every occurrence of the text in the **Find what** field with the text in the **Replace with** field.
Cancel	Clicking this button closes the **Find** dialog box.

Replace in Files

The **Replace in Files** option allows the user to replace text strings in files stored on their drives. Selecting **Replace in Files** from the **Edit Menu** opens the **Replace in Files** dialog box. The table below shows the list of options in the dialog box.

OPTIONS	ACTION
Find what	Enter the text string to be search for in the **Find what** field.
Replace with	Enter the replacement text string in the **Replace with** field that is to replace the text in the **Find what** field.
File types	Select the type of file to be searched in the **File types** drop down list.
Match case	Set the **Match case** check box to find the exact specified text string.
Regular expression	Set the **Regular expression** check box and select an expression from the expression list to use an expression to facilitate the search.
Where	Select the **Search in workspace** radio button to seach for the text string in a file that is in DCIBench. Select the **Search in directories** radio button to search for the text string in a specific directory.
Look in	Select the directory to be searched in the **Look in** field. Or click the **Browse** button for further search options.
Include subdirectories	Set the **Include subdirectories** check box to include the subdirectories in the search.
Replace All	Click **Replace All** to replace every occurrence of the text in the **Find what** field with the text in the **Replace with** field.
Cancel	Clicking this button closes the **Find** dialog box.

Go to

The **GO to** option allows users to designate a destination for the cursor in the active document.

Options	Action
Begin	Moves the cursor to the beginning of the active Code Editor document.
End	Moves the cursor to the end of the active Code Editor document.
Line	Opens the **Go To Line** dialog box, which displays the total number of lines in the Code Editor document. Enter the number of the line where the cursor is to be positioned.

Bookmark

The **Bookmark** option allows users to set, navigate and delete bookmarks. All options are available from the **Bookmark** submenu.

Options	Action
Toggle Bookmark	This option allows users to insert/remove a bookmark into/from the Bookmark pane for the selected line.
Go to Next Bookmark	This option allows a user to automatically move the cursor to the next bookmarked line.
Go to Previous Bookmark	This option allows a user to automatically move the cursor to the previous bookmarked line.
Clear All Bookmarks	This option allows a user to clear all bookmarks from the active document.

6.3 View Menu Commands

The **View Menu** commands allow users to view or hide various tool bars and other components in DCIBench.

Toolbars

The **Toolbars** option in the **View Menu** allows users to hide or display the Standard, Editor and Launch toolbars. Setting these options in the **Toolbars** submenu displays the respective toolbar. Clearing these options hides the respective toolbar.
The **Toolbars** option also allows users to customize the toolbars and even to create new toolbars. Selecting **Customize** from the submenu opens the **Customize** dialog

box. The toolbars can be displayed, hidden, modified and new toolbars can created from the **Customize** dialog box. External applications can also be added to the Launch bar from the **Customize** dialog box.
The **Toolbars** submenu can also be accessed by right clicking on any of DCIBench's toolbars.

Status Bar

Setting **Status Bar** in the **View Menu** displays the **Status** bar in DCIBench. Clearing this option hides the **Status** bar.

Workspace

Setting **Workspace** in the **View Menu** displays the **Workspace** window in DCIBench. Clearing this option hides the **Workspace**. This option can also be accessed from small pop up wind that appears by right clicking anywhere in the workspace.

Output Window

Setting **Output Window** in the **View Menu** displays the **Output Window** in DCIBench. Clearing this option hides the **Output Window**. This option can also be accessed from small pop up wind that appears by right clicking anywhere in the **Output Window**.

Full Path Name

Setting **Full Path Name** in the **View Menu** displays the full path name of the active file in the Code Editor. The path name is displayed in the **Title** bar. Clearing this option hides the full path name of the active file in the Code Editor.

Ruler Bar

Setting **Ruler Bar** in the **View Menu** displays the **Ruler bar** in the Code Editor. Clearing this option hides the **Ruler Bar**.

Line Number Pane

Setting **Line Number Pane** in the **View Menu** displays the **Line Number Pane** in the Code Editor. Clearing this option hides the **Line Number Pane**.

Bookmark Pane

Setting **Bookmark Pane** in the **View Menu** displays the **Bookamrk Pane** in the Code Editor. Clearing this option hides the **Bookmark Pane**. Displaying the **Bookmark Pane** does not make bookmarks inert. Bookmark navigation is available to users. Users will simply be unable to view bookmarks with the **Bookmark Pane**.

6.4 Format Menu Commands

The following is a list of the Code Editor commands available in the Format menu command list. These commands will assit the user when modifiying or generating source code.

Capitalize

Selecting **Capitalize** from the **Format Menu** capitalizes uncapitalized words in a selection.

Uppercase

Selecting **Uppercase** from the **Format Menu** changes all lowercase characters in a selection to uppercase

Lowercase

Selecting **Lowercase** from the **Format Menu** changes all uppercase characters in a selection to lowercase.

Comment Block

Selecting **Comment Block** from the **Format Menu** allows users apply comments symbols in the Indicator area of a selected block of text in the Code Editor.

Uncomment Block

Selecting **Comment Block** from the **Format Menu** allows users to remove comment markings from a block of text in source code that is currently marked for comment.

Sequence Number

Selecting **Sequence Number** from the **Format Menu** allows users to re-number source code and display the new numbering in the **Sequence Number** area of the Code Editor. Selecting this option opens the **Sequence Number** dialog box. The table below shows the options available to users.

Options	Action
Make	Setting the **Make** radio button allows users to set the starting number and interval number for line sequencing.
Starting No.	The **Starting No.** is the number that the Code Editor will use to begin numbering the line sequences of code.
Interval	The **Interval** is the number that the Code Editor will use to increase the numbering between lines of code.
Clear	This option allows users to clear all sequence numbering in the source code appearing in the Code Editor.
All	Set this radio button to re-number the entire source code document.
Selection	If a block of text from the source code has been selected this radio button is automatically set.
Lines	This option allows users to specify the lines of code to be effected by the numbering change.
OK	Click **OK** to save and apply the sequence number options.
Cancel	Click **Cancel** to exit the **Sequence Number** dialog box.

Indent to Next

Selecting **Indent to Next** from the **Format Menu** allows users to change the indent of the current line to match that of the next line.

Indent to Previous

Selecting **Indent to Previous** from the **Format Menu** allows users to change the

indent of the current line to match that of the previous line.

ANSI to Terminal Format

Toggles the foreground and background colors of source code between ANSI and terminal format, as was defined them in the **Tools -> Options -> Code Editor -> Format** options.

6.5 Tools Menu Commands

The Tools Menu commands allow users to launch external executable files, customize and create toolbars and set environment, Code Editor and Data Designer options.

Launched Tools

Selecting this option allows users to launch external executable files. This option is only active after users have defined the external executable files in the **Customize** dialog box. Selecting this options opens the **Customize** dialog box.

Customize

Selecting **Customize** opens the Customize dialog box. The **Customize** dialog box contains three tabs for setting various options. The **Toolbars** tab allows users to set options for displaying or hiding toolbars in DCIBench and options for creating new toolbars. The **Commands** tab allows users to modify new and existing toolbars with various toolbar commands. The **Tools** tab allows users to add links to external applications to allow for easy access.

TOOLBARS TAB

The **Toolbars** tab allows users to set options for displaying or hiding toolbars in DCIBench and options for creating new toolbars. The table below details the options available to users in the **Toolbars** tab of the **Customize** dialog box.

Options	Action
Toolbars	The **Toolbars** window displays the toolbars available to users. Setting the check box next to a toolbar displays the toolbar in DCIBench. Clearing the check box next to a toolbar hides the toolbar.
New	Clicking the **New** buttn opens the **New Toolbar** dialog box. Enter a toolbar name in the Toolbar name field of the dialog box. Click **OK** and the toolbar's name is displayed in the **Toolbars** window. And a new toolbar appears in the DCIBench environment.
Delete	This option allows users to delete a toolbar when it is no longer needed.
Reset	Click **Reset** to return to the default setting for the toolbar selected in the Toolbars list.
Reset All	Click **Reset All** to return to the default setting for all available toolbars.
Close	Click **Close** to close the **Customize** dialog box.

Commands Tab

The **Commands** tab allows users to modify new and existing toolbars with various toolbar commands. The table below details the options available to users in the **Commands** tab of the **Customize** dialog box.

Options	Action
Categories	The **Categories** window displays the categories the toolbar commands are grouped in. The commands are grouped according to their functionality.
Buttons	The **Buttons** area displays the toolbar commands available to the user.
Close	Click **Close** to close the **Customize** dialog box.

Tools Tab

The **Tools** tab allows users to add links to external applications to allow for easy access. The table below details the options available to users in the **Tools** tab of the **Customize** dialog box.

Options	Action
Menu Contents	The **Menu Contents** window displays the links to external applications that are currently available to the user.
Delete Button	The **Delete** buttonnb allows the user to remove a link to an external application. This action can also be performed by pushing the Delete key on the keyboard.
New	Click **New** to add an application to the **Menu Contents** list. This action can also be performed by pressing the Insert ley on the keyboard.
Command	Enter the full directory path and file name of the program to be run when this menu command is selected.
Arguments	If necessary, enter the appropriate arguments for the command. Select arguments for the command by clicking the button to the right of the Arguments field. **File Path** {**FilePath**} is the full path name of the files that are contained in the working project or folder. **File Directory** {**FileDir**} is the directory of files that are contained in the working project or folder. **File Name** {**FileName**} is the file name of the files that are contained in the working project or folder. **Current Directory** {**CurDir**} is the current directory containing the DCIBench application. **Workspace Path** {**WkspPath**} is the full path name of the current workspace. **Project Directory** {**ProjectDir**} is the directory containing the working project. **Project Name** {**ProjectName**} is the name of the working project.
Working Directory	Enter the path for the working directory from which the new command can be executed. Select the appropriate variables by clicking the button to the right of the Working Directory field. **File Directory** {**FileDir**} is the directory of files that are contained in the working project or folder. **Current Directory** {**CurDir**} is the current directory containing the DCIBemch application. **Project Directory** {**ProjectDir**} is the directory containing the working project.
Context menu	Enter the text to be displayed when selecting the **Launched**

	Tools option from the **Tools Menu.**
Use output window	Setting this option will display the output from the linked application in the **Output Window** of DCIBench.
Prompt for argument	Set this option to initiate a dialog box to open and specify options and arguments before opening the external program.
Close	Click **Close** to close the **Customize** dialog box.

6.6 Options

DCIBench's environment options are divided into several categories, which include, General, Template, Build, Keyboard and Prefix options.

Options -> Environment -> General

The General environment options for DCIBench allow the user to control:

- the timing of the automatic save function
- the Recently Used Files list
- what the workbench loads when it is first started and when it opens a workspace
- the default source file format
- the translation of ASCII extended characters to Windows ANSI extended characters

Options	Action
Save option	Check the **Save option** box to activate automatic saves. The **Automatic save every:_____minutes** text box becomes active. Enter a new value into the **Automatic save every:_____minutes** text box if the default setting of ten minutes is not suitable
Recently used files list	Allows the user to set the number of recently used files that will appear in the recently used files list that appears in the **File Menu**.
Recently used workspaces list	Allows the user to set the number of recently used files that will appear in the **Recent Workspace** list that appears in the **File Menu**.
Show empty environment	Setting this option directs DCIBench, on start up, to open no workspaces and thus open as an empty environment.
Show new project dialog	Setting this option directs DCIBench, on start up, to open the New dialog box.
Reload last workspace	Setting this option directs DCIBench, on start up, reload the last active workspace.
Reload documents	Setting this option directs DCIBench to reopen the documents that were open the last time the workspace was open.
ANSI source format	Directs source files to be treated as ANSI source format files.
Terminal source format	Directs source files to be treated as Terminal source format files.
Translate to ANSI/OEM	Causes DCIBench to translate extended ASCII characters that originate in the OEM environment to Windows ANSI extended characters. Characters are retranslated back to OEM when the document is saved.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Environment -> Template

Template environment options allow the user the to set preferences for:

- use or bypassing of the New/File dialog box when creating new FD/SL's or files
- adding or customizing of templates for files

OPTIONS	ACTION
New File	Setting this option directs DCIBench to open the New dialog box every time a user tries to create a new file.
New FD/SL	Setting this option directs DCIBench to open the New dialog box every time a user tries to create a new FD/SL.
Template for	Allows users to select the type of template to be used from the drop down list.
Add	Click **Add** to add a template file.
Delete	Click **Delete** to remove a selected template file.
Modify	Click **Modify** to modify a template file. Clicking this button opens the Modify Template File Infromation dialog box. From the dialog box the files name, file path and user description of the file can be modified.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Environment -> Build

Build environment options allow the user to control certain aspects of how DCIBench behaves when running tools or generating FD/SL files.

OPTIONS	ACTION
Always save all documents	Set this option to direct DCIBench to save all files before a tool is run.
Prompt before generating if the file is not DCI format	Setting this option directs DCIBench to always display a confirmation dialog box before generating files if the file is not in DCI format.
Skip generating if the file is not DCI format	Setting this option directs DCIBench to always generating a file if the file is not in DCI format.
Always overwrite anyway if the file exists	Setting this option directs DCIBench to always overwrite exiting files when generating new files.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Environment -> Keyboard

Keyboard environment options allow the user to view, define, redefine, or remove keyboard shortcut keys associated with DCIBench and DCIBench's Code Editor commands.

Options	Action
Category	Select the keyboard shortcut category, to be viewed, defined, redefined, or removed, from the **Category** drop down list.
Reset All	Click Reset All to have all shortcut keys reset to default settings.
Command	This field lists all of the workbench commands that belong to the selected category.
Shotcut Key	This field displays the currently assigned keyboard shortcut combination. If no keyboard shortcut combination has been assigned the field is blank.
Shortcut key	Enter keyboard short cut combinations in this field.
Assign	Click **Assign** after entering a shortcut combination in the **Shortcut key** field.
Remove	Click **Remove** to delete an assigned shortcut combination in the **Shortcut Key** field.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Environment -> Prefix

Prefix environment options allow the user to change the default file prefix strings and the default working directory names that are applied when the user creates a new project, FD/SL or file.

OPTIONS	ACTION
Project prefix	The prefix string applied to name of a new project.
FD/SL prefix	The prefix string applied to name of a FD/SL file.
File prefix	The prefix string applied to name of a new file.
XML directory	The name of the XML file directory
FD directory	The name of the FD/SL file directory
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Code Editor -> General

The General Code Editor options that can be set by the user include:

- modifying the width of the Line Number pane
- modifying the length of a line in the Code Editor
- setting the delimiter options for saving in a Windows or Unix environment
- setting the vertical block behavior

OPTIONS	ACTION
Line number pane width	Allows uers to modify the width of the Line Number pane.
Line length *x* columns	Allows users to modify the length of a line in the Code Editor.
Save Record Delimiter as CR/LF	Lets you choose the carriage return/linefeed (CR/LF) ASCII end-of-line marker used in MS-DOS for files.
Save Record Delimiter as LF	Allows users to choose the linefeed (LF) ASCII end-of-line marker used in UNIX for files.
Virtual Space	Allows users to determine the Code Editor's vertical block select behavior.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Code Editor -> Format

Format Code Editor options allow the user to set options for:

- setting the source file format
- modifying the source file code
- modifying the colour that identify each ANSI display field
- customizing the text apperance of code types
- designating the text string that is inserted in ANSI format when modifying source code

OPTIONS	ACTION
Source format	Allows uers to select the source format of the source code, whose apperence is to be modified.
Modify code	Check the **Modify Code** check box if the user wants to insert a specified character string in ANSI format columns 73-80 when a line of code is added or modified. Enter the desired string to be inserted in the adjacent entry field.
Enable "Format" and "Highlight"settings	Allows users to set or disable all colour functions in the **Format** page of the **Options** dialog box.
Coulumns	Allows users to modify the column width of the editing area selected in the list box.
Background	Allows users to determine the background colour of the editing area defined in the list box.
Foreground	Allows users to determine the foreground colour of the editing area defined in the list box
Font	Allows users to select the font to be displayed in DCIBench documents.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Code Editor -> Tabs

Tabs Code Editor options allow the user to control support of the tabs in source code or automatically convert tabs in code to spaces.

OPTIONS	ACTION
Display tab character with	Set the **Display Tab character with** check box to display a special character to indicate the location of a tab in the code. Insert a non-blank character in the accompanying entry field.
Tab size	Allows user to define the default tab size.
Source format	Select a source format from the **Source format** drop down list. Different sets of tab stops can be set for each source format.
Keep tabs	Set the **Keep Tabs** radio button if the Code Editor is to support the insertion of tabs using the default tab size.
Insert spaces	Set the **Insert spaces** radio button if the Code Editor is to support the conversion of tabs to spaces or to set individual tab stops in the code.
Tabs	Enter the desired tab size in the **Tabs** field. Established tabs are listed in the window below the field.
Add	Allows users to add to tabs list. The tab size is set in the **Tabs** field..
Delete	Allows users to remove a tab from the tabs list.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Code Editor -> Keyword

Keyword Code Editor options allow the user to add, delete, and modify keyword sets. Several default keyword sets are listed in the Keyword Set drop-down list. The user can also associate an indent value with a keyword and set an auto-indent behavior. The indent value is applied to the line following the keyword.

Options	Action
Keyword Set	This drop down box allows users to view the keyword sets for various types of code. Select the desired keyword set to be modified from the list.
Add	Click the **Add** button to add a keyword list. Clicking this button opens the **Add Keyword Set** dialog box. From this dialog box the user is able to assign the keyword set name, and whether the keyword set is imported from an existing keyword set, an external keyword set or if the keyword set is new.
Delete	Clicking this button removes a keyword set from the keyword set list.
Delete (Del)	This button allows users to remove a keyword from the keyword list, specified by the **Keyword Set**.
New (Ins)	This button allows users to add a keyword to the keyword, list specified by the **Keyword Set**.
Keyword	This field displays a keyword's name. To modify a keyword name click the keyword in the **Keyword** list field and enter a new name.
Indent value	This field displays the indent value for keywords. To modify a keyword's indent value click in the **Indent Value** field for the keyword and enter a new value.
None	With this option, the cursor returns to column 1 of the next line after a carriage return.
First nonblank	With this option, a carriage return sends the cursor to the next line at the location of the first non-blank character in the previous line.
Customized	With this option, the Code Editor applies the keyword indent values shown in the keyword list box.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Data Designer -> General

General Data Designer options allow the user to select the colours used to display linked items (items brought in via a COPY statement) included with the data designers.

OPTIONS	ACTION
Copy file color	This area allows users to select the colors used to show data items that are **Linked to** in a data structure (included via the **Link to file** option of the **Add Item** list). Linked items may themselves include COPY statements. Items included as the result of nested COPY statements can also be shown in a contrasting color. To set the color used by each level, double-click in the **Text Color** field of the desired level and select a color.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

Options -> Data Designer -> Graphical

Graphical FD Data Designer options allow the user to set the element prefix and the level-number interval settings for data items.

OPTIONS	ACTION
Set Element Prefix	Allows users to change the default prefix setting in the entry field.
Elementary Level Settings	Allows users to set the level-number intervals for the second, third, and fourth sub-item levels of generated code, as well as an interval for any subsequent levels. The first level stteing connot be altered. Settings are displayed in the window below the **ElementaryLevel Settings** area of the dailog box.
Save…	Click **Save …** to save the current settings to a file that the user can specify.
Load…	Click **Load …** to retrieve settings from a file that the user has specified.
OK	Click **OK** to save current settings.
Cancel	Click **Cancel** to close the **Options** dialog box without saving.

6.7 Window Menu Commands

Window Menu commands allow users to manipulate the Canvas Area, which is shared by the Code Editor and the File Designer, for more efficient use.

Split

Selecting **Split** from the **Window Menu** splits the Code Editor window into two. This allows users to view separate portions of the same code simultaneously making code editing more efficient.

Close All

Selecting **Close All** from the **Window Menu** closes all active windows in the Canvas Area.

Cascade

Selecting **Cascade** from the **Window Menu** overlaps active windows for the upper left of the Canvas Area to the lower right. All file title bars are visible to the user

allowing for quick access to any window.

Tile Horizontally

Selecting **Tile Horizontally** from the **Window Menu** postions all active windows in a horizontal format. The most recently active file will appear in the upper left corner of the Canvas Area with the next most recently active window to the right of the first window, and so on. Windows do not overlap in this setting.

Tile Vertically

Selecting **Tile Vertically** from the **Window Menu** postions all active windows in a vertical format. The most recently active file will appear in the upper left corner of the Canvas Area with the next most recently active window directly below the first window, and so on. Windows do not overlap in this setting.

Arrange Icons

Selecting **Arrange Icons** from the **Window Menu** allows users to postion minimized title bar icons, for active windows, in the Canvas Area.

Recent Windows

The **Window Menu** displays recently active windows in order of activity.

Windows

Selecting **Windows** from the Window Menu opens theWindows dialog box. From the dialog box users are able to view all active windows and save, close, activate or cascade the windows in the list.

6.8 Help Menu Commands

The **Help Menu** commands give users access to information about utilizing DCIBench, as well as, copyright and identification information.

DCIBench Contents

Selecting **DCIBench Contents** opens the DCIBench help file. The help file can provide useful information to users about using DCIBench.

About DCIBench

Selecting About DCIBench opens a dialog box which displays copyright and identification information about DCIBench.

7 Toolbar Reference

Toolbars provide quick access to many of DCIBench's editing, managing functions and access to external applications as well.

Standard Toolbar

The Standard toolbar is a palette of command buttons for the most commonly used word processing functions. Users can display or hide the Standard toolbar by choosing the **View -> Toolbar -> Standard** command. Users can also display or hide the Standard toolbar by right-clicking in the toolbar and choosing **Standard**, or by selecting **Customize** and then **Standard** in the **Customize** dialog box. The table below lists the toolbar commands and the asscociated Menu commands.

Command Button	Menu Equivalent	Action
	File ->New	The **New** button opens the New dialog box. Allows users to create new files, projects and templates.
	File -> Open	The **Open** button opens the Open dialog box. This allows users to open existing files.
	File -> Save	The **Save** button saves the active file using its current file name. The Save As dialog box appears if the file has not yet been saved,
	File -> Save All	The **Save All** button saves all active files in DCIBench.
	File -> Print	The **Print** button sends the active file to a printer.
	File -> Print Preview	The **Print Preview** button allows a view on an active file before printing
	Edit -> Cut	The **Cut** button removes the selected item and places it on the clipboard..
	Edit -> Copy	The **Copy** button places a copy of the selected item on the clipboard.
	Edit -> Paste	The **Paste** button places a selection that has been cut or copied to the clipboard into the active file.
	Edit -> Undo	The **Undo** button reverses recent editing actions.
	Edit -> Redo	The **Redo** button reverses recent undo operations.
	View -> Workspace	The **Workspace** button toggles the view of the workspace in DCIBench
	View -> Output Window	The **Output Window** button toggles the view of

		the Output window in DCIBench.
	N/A	The **Generate** button generates FD/SL files.
	N/A	The **Refresh** button refreshes files in DCIBench.
	**Help -> About DCIBench**	The **About** button displays the DCIBench identification and copyright information.

Editor Toolbar

The Editor toolbar commands allow users to quickly access commomly used text search and replace functions and bookmark management functions.

COMMAND BUTTON	MENU EQUIVALENT	ACTION
	Edit ->Find	The **Find** entry field allows users to enter the text string they want to find. It also allows users to select text from a drop-down list of recent search operations
	Edit -> Find Next	The **Find Next** button advances the user to the next occurrence of the selected item in the active document.
	Edit -> Find in Files	The **Find in Files** button allows the user to locate text strings in files stored on drives.
	Edit -> Replace	The **Replace** button allows the user to replace items in the text with other items.
	Edit -> Replace in Files	The **Replace in Files** button allows the user to replace text strings in files stored on drives.
	Edir -> Bookmark -> Toggle Bookmark	The **Toggle Bookmark** button inserts a bookmark into the Bookmark pane for the selected line.
	Edit -> Bookmark -> Go to Next Bookmark	The **Go to Next Bookmark** button allows a user to automatically move the cursor to the next bookmarked line.
	Edit -> Bookmark -> Go to Previous Bookmark	The **Go to Previous Bookmark** button allows a user to automatically move the cursor to the previous bookmarked line.
	Edit -> Bookmark -> Clear All Bookmarks	The **Clear All Bookmarks** allows a user to clear all bookmarks from the active document.

Launch Toolbar

From the Launch Toolbar users are able to execute external applications by clicking the icon for the application. Icons are defined in the **Tools -> Customize -> Tools** options.

8 Pop Up Menu Reference

The pop up menu reference is a complete listing of all the pop up menus in DCIBench and the commands found in them.

8.1 Toolbar Pop Up Menu

Right click anywhere in any of the toolbars and the toolbar pop up menu appears. The following table outlines the options available from the menu.

OPTIONS	ACTION
Standard	Setting this option displays the **Standard** toolbar. Clearing this option hides the toolbar.
Editor	Setting this option displays the **Editor** toolbar. Clearing this option hides the toolbar.
Launch	Setting this option displays the **Launch** toolbar. Clearing this option hides the toolbar.
Customize	Click **Customize** to open the **Customize** dialog box. Users are able to create and modify toolbars from the dialog box.

8.2 Workspace Pop Up Menus

The workspace has a number of pop up menus which aid the user in workspace and file management.

General Workspace Pop Up Menu

Right click anywhere, except a file or project node, in the Workspace to make the Workspace pop up menu appear.

Options	Action
Save Workspace	Clicking the **Save Workspace** option in the menu saves all active files in the workspace.
Clsoe Workspace	Clicking the **Close Workspace** option in the menu closes the active workspace.
Allow Docking	Setting this option allows the docking of the Workspace window. Clearing this option allows the Workspace window to float.
Hide	Setting this option hides the Workspace window.

Project Node Pop Up Menu

Right click on a project node to make the Project node pop up menu appear.

OPTIONS	ACTION
New FD/SL	Clicking the **New FD/SL** option in the menu opens the New FD/SL dialog box. From the dialog box users can create new FD/SL files or import FD/SL files to a project.
Add FD/SL	Clicking the **Add FD/SL** option in the menu opens the Add Data Layout to Project dialog box. From the dialog box users can import existing FD/SL files to a project.
Refresh All	Clicking the **Refresh All** option in the menu causes all of the project's XFD XML layout files (.xlt) to be rebuilt from their corresponding .fd .sl and .xml files.
Generate All FD/SLs	Clicking the **Generate All FD/SLs** option in the menu directs DCIBench to generate all FD, SL files for the project.
Generate All XMLs	Clicking the **Generate All XMLs** option in the menu directs DCIBench to generate all XML files for the project.
Generate All	Clicking the **Generate All** option in the menu directs DCIBench to generate all FD, SL and XML files for the project.
Delete	Removes the current project and all associated files from the workspace.
Close Project	Closes and saves the active project and all it's componet windows.
Properties	Opens the **Project Properties** dialog box. From the dialog box users can view the project name, project directory, the copy file path, and the working directories for FD, SL and XML files Only the project name and copy file path can be modified in this dialog box.

File Node Pop Up Menu

Right click on a file node in the Workspace to make the File Node pop up menu appear.

Options	Action
View *file_name*.fd	Clicking the **View *file_name*.fd** option in the menu opens the selected FD file in the Code Editor.
View *file_name*.sl	Clicking the **View *file_name*.sl** option in the menu opens the selected SL file in the Code Editor.
View *file_name*.xml	Clicking the **View *file_name*.xml** option in the menu opens the selected XML file in the Code Editor.
Browse *file_name*.xml	Clicking the **Browse *file_name*.xml** option in the menu opens the selected XML file in the user's web browser.
Refresh *file_name*	Clicking the **Refresh *file_name*** option in the menu directs DCIBench to rebuild the selected data layout from it's corresponding .fd, .sl and .xml files.
Generate *file_name*.fd	Clicking the **Generate *file_name*.fd** option in the menu generates the selected FD file from the data layout.
Generate *file_name*.sl	Clicking the **Generate *file_name*.sl** option in the menu generates the selected SL file from the data layout.
Generate *file_name*.xml	Clicking the **Generate *file_name*.xml** option in the menu generates the selected XML file from the data layout.
Open *file_name*	Clicking the **Open *file_name*** option in the menu directs DCIBench to open the selected file in the File Designer.
Save *file_name*.xlt	Clicking the **Save *file_name*.xlt** option in the menu directs DCIBench to save the selected data layout.
Delete *file_name*.xlt	Clicking the **Delete *file_name*.xlt** option in the menu directs DCIBench to remove the selected data layout from the current project.
Delete From Disk	Clicking the **Delete From Disk** option in the menu directs DCIBench to remove the selected data layout from the disk.
Properties	Opens the **Data Layout Properties** dialog box. From the dialog box users can view the file name, the unique file prefix, the data layout directory, the FD file directory, the SL file directory, the XML file directory and the source type for the file. Only the file name and unique file prefix can be modified in this dialog box.

8.3 Output Pop Up Window

Right click anywhere in the Output Window to make the Output Window pop up

menu appear.

Options	Action
Copy	Selecting **Copy** from the menu places a copy of the selected item on the clipboard.
Clear	Selecting **Clear** from the menu clears all text from the active Output window.
Select All	Selecting **Select All** from the menu selects all text in the active Output window.
Save As	Selecting **Save As** allows users to save the contents of the active Output window to a file.
Find in Objects	Selecting Find in Objecs allows users to locate text strings in the files that contain Property window elements.
History	This option toggles the way in which the output of a new action is placed in the Output Window. When **History** is set the output of the next action is added to the end of the existing output. When **History** is clear the contents of the Output Window are cleared before output from the next action.
Previous Error	Selecting this option moves the cursor in the source code to the previous compilation error in the Output window list.
Next Error	Selecting this option moves the cursor in the source code to the next compilation error in the Output window list.
Allow Docking	Selecting this option allows users to toggle the Output window as floating or docked.
Hide	This option allows users to display or hide the Output Window.

8.4 Code Editor Pop Up Menus

The Code Editor pop up menus allow users quick access to useful and often used code editing functions.

Options	Action
Undo	The **Undo** option reverses recent editing actions.
Redo	The **Redo** option reverses recent undo operations.
Cut	The **Cut** option removes the selected item and places it on the clipboard..
Copy	The **Copy** option places a copy of the selected item on the clipboard.
Paste	The **Paste** option places a selection that has been cut or copied to the clipboard into the active file.
Find	The **Find** option advances the user to the next occurrence of the selected item in the active document.
Find Next	The **Find Next** option advances the user to the next occurrence of the selected item in the active document.
Toggle Bookmark	The **Toggle Bookmark** option inserts a bookmark into the Bookmark Pane for the selected line.
Open Copy File	This option opens a COPY file from the selected source.
Properties	Opens the **Properties** dialog box. From the dialog box users can view the file name, the file size, the date of the most recent save, the file format, and display options for the Bookmark Pane, File Path Name, Ruler Bar and Line Number Pane. Only the file format, and display options for the Bookmark Pane, File Path Name, Ruler Bar and Line Number Pane can be modified in this dialog box.

8.5 File Designer Pop Up Menus

The File Designer pop up menus give users quick access to functions associated with FD, SL and XML files.

File Defintion Tab Pop Up Menu

Right click anywhere in the File Definition tab to make the File Definition tab pop up menu appear.

OPTIONS	ACTION
Add Item Before	The **Add Item Before** option allows users to and an item before the selected entry.
Add	The **Add** option allows users to and an item after the selected entry.
Add Sub-item	The **Add Sub-item** option allows users to and a sub-item after the selected entry.
Undo	The **Undo** option reverses recent editing actions.
Redo	The **Redo** option reverses recent undo operations.
Cut	The **Cut** option removes the selected item and places it on the clipboard..
Copy	The **Copy** option places a copy of the selected item on the clipboard.
Paste	The **Paste** option places a selection that has been cut or copied to the clipboard into the active file.
Delete	The **Delete** option allows users to remove the selected item or sub-item. It is important to remember that deleting an item or sub-item deletes all sub-items below in rank.
Select All	This option allows users to select all items and sub-items appearing in the Data item definition list.
Link Copy File	The **Link Copy File** option allows users to link to the contents of another file. The contents of that file are included in a COPY statement when the generated file is compiled. The file can contain only data file descriptors.
Import Copy File	The **Import Copy File** option allows users to copy the contents of another file. The imported file can contain only data file descriptors.
Open Copy File	This option opens a COPY file from the selected source.
Remove Copy File	This option allows users to delete a link to another file.
Reload Copy Files	The **Reload Copy Files** option allows users to reload the contents of the selected COPY files.
View *file_name*.fd	The **View *file_name*.fd** option opens the active SL file in the Code Editor.
Generate FD/SL	The **Generate FD/SL** option generates the FD/SL files form the data layout.

File Control Tab Pop Up Menus

Main Pop Up Menu

Right click anywhere, except the Key list area, in the File Control tab to make the File control tab pop up menu appear.

Options	Action
Undo	The **Undo** option reverses recent editing actions.
Redo	The **Redo** option reverses recent undo operations.
View *file_name*.sl	The **View *file_name*.sl** option opens the active SL file in the Code Editor.
Generate FD/SL	The **Generate FD/SL** option generates the FD/SL files form the data layout.

Key List Pop Up Menu

Right click anywhere in the Key list area of the File Control tab to make the Key list pop up menu appear.

Options	Action
Add	This option allows users to add a key to the Key list.
Undo	The **Undo** option reverses recent editing actions.
Redo	The **Redo** option reverses recent undo operations.
Modify	This option allows users to modify the selected key in the **Key list**.
Delete	The **Delete** option allows users to remove the selected key from the Key list.
Delete All	The **Delete All** option allows users to remove all keys form the **Key list**.
Select All	The **Select All** option allows users to select all keys in the **Key list**.
View *file_name*.sl	The **View *file_name*.sl** option opens the active SL file in the Code Editor.
Generate FD/SL	The **Generate FD/SL** option generates the FD/SL files form the data layout.

DCI Tab Pop Up Menu

Right click anywhere in the DCI tab to make the DCI tab pop up menu appear.

OPTIONS	ACTION
Undo	The **Undo** option reverses recent editing actions.
Redo	The **Redo** option reverses recent undo operations.
View *file_name*.xml	The **View *file_name*.xml** option opens the active SL file in the Code Editor.
Browse *file_name*.xml	The **Browse *file_name*.xml** option opens the active XML file in the users web brower.
Generate XML	The **Generate FD/SL** option generates the FD/SL files form the data layout.

9 Key Board Shortcut Reference

9.1 Introduction

DCIBench allows users to define keyboard shortcuts for most DCIBench commands. The **Tools -> Options -> Environment -> Keyboard** dialog box lists all DCIBench keyboard shortcuts.

9.2 Main: Default Keyboard Shortcuts

Selecting **Main** from the **Category** drop down list box in the **Tools -> Options -> Environment -> Keyboard** dialog box lists the keyboard shortcuts for toolbar, pop up menu and menu commands.
The **Command** column in the table is the name assigned to the shortcut command.
The **Shortcut Key** column lists the keyboard key combination required to initiate the shortcut. A blank entry in this column denotes that the user must assign a keyboard key combination to use the shortcut.
The **Action** column describes the action that is performed when the shortcut is initiated.

COMMAND	SHORTCUT KEY	ACTION
About DCIBench		Displays DCIBench copyright, registration and contact information
AddFD		Add a data layout to the current project.
AddItem		Add a data item to the record definition in the File Designer.
AddItemBefore		Add a data item before the selected item in the File Designer's record definition.
AddKey		Add a key for an indexed file in the File Designer.
AddSubItem		Add a subitem to a group data item in the File Designer's record description.
ApplicationExit	Ctrl + E	Quit the application, and prompt to save the documents.
BookmarkClearAll	Ctrl + Shift + F2	Clear all bookmarks.
BookMarkNext	F2	Move the cursor to the line containing the next bookmark
BookmarkPrev	Shift + F2	Move the cursor to the line containing the previous bookmark.
BookmarkToggle	Ctrl + F2	Toggle the display of a bookmark on the current line.
BrowseXMLFile		Browse the generated XML in the web browser.
CharBackTab	Shift + Tab	Move the cursor back one tab stop.
CharLeft	Left Arrow	Move one character to the left.
CharLeftExtend	Shift + Left Arrow	Select one character to

		the left.
CharRight	Right Arrow	Move one character to the right.
CharRightExtend	Shift + Right Arrow	Select one character to the right.
CharTab	Tab	Move the cursor forward one tab stop.
CloseFDSL		Close and save the active FD/SL file.
CloseProject		Close and save the active project.
CommentBlock		Apply comment symbols to the selected block of text.
Copy	Ctrl + C	Copy the selection to the clipboard.
Cut	Ctrl + X	Cut the selection and move it to the clipboard.
Delete	Del	Delete the selection.
DeleteAllKey		Delete all the keys in the File Designer's Key list.
DeleteBack	Backspace	Delete the selected text or the character to the left of the cursor.
DeleteFromDisk		Delete the file from disk.
DeleteLine	Ctrl + Shift + Z	Delete the selected line.
DockingProjectManager		Dock the Workspace window.
DocumentEnd	Ctrl + End	Move the cursor to the end of the document.
DocumentEndExtend	Ctrl + Shift + End	Select the text from the current cursor position to the end of the document.
DocumentStart	Ctrl + Home	Move the cursor to the beginning of the file.
DocumentStartExtend	Ctrl + Shift + Home	Select the text from the current cursor position to the start of the document.

FileClose	Ctrl + Q	Close the file.
FileCloseWorkspace		Close the workspace.
FileOpen	Ctrl + O	Open an existing source file.
FileOpenWorkspace		Open an existing workspace
FilePageSetup	Ctrl + M	Open the Page Setup dialog box.
FilePrint	Crtl + P	Print the active file.
FilePrintPreview		Display full pages in print preview.
FilePrintSetup	Ctrl + K	Open the Print Setup dialog box.
FileProperties		Display file properties in the Properties dialog box.
FileSave	Ctrl + S	Save the active file.
FileSaveAll		Save all open files.
FileSaveAs		Open the Save As dialog box.
FileSaveWorkspace		Save the current workspace.
Find	Ctrl + F	Find the specified text in the active file.
FindInFiles		Find the specified text in the workspace or other designated directory.
FindNext	F3	Find the next occurrence of the specified text.
FindPrev	Shift + F3	Find the previous occurrence of the specified text.
FindReplace	Ctrl + H	Find the specified text and replace it with another designated string.
GenerateProjectBoth		Generate code for all FD,SL and XML files in the active project.
GenerateProjectFDSL		Generate code for all FD

		and SL files in the active project.
GenerateProjectXML		Generate code for all XML files in the active project.
GenerateBoth		Generate code for FD,SL and XML files for the selected data layout.
GenerateFDSL		Generate code for the FD and SL files for the active data layout.
GenerateXML		Generate code for the XML file for the active data layout.
GotoLine	Ctrl + G	Move the cursor to the specified line of code.
Help	F1	Display the help topics table of contents.
HelpTopics		Display the help topics table of contents.
Home	Home	Move the cursor to the start of the current line.
HomeExtend	Shift + Home	Select the text from the current cursor position in a line to the start of that line.
ImportCopyFile		Import a COPY file into the specified File Designer file descriptor.
IndentToNext		Indent the selected line to match the indentation of the next line.
IndentToPrev		Indent the selected line to match the indentation of the previous line.
InsertMode	Ins	Toggle insert mode in the Code Editor.
LineDown	Down Arrow	Move the cursor down one line.
LineDownExtend	Shift + Down Arrow	Select the text from the

		current cursor position down one line.
LineEnd	End	Move the cursor to the end of the current line.
LineEndExtend	Shift + End	Select the text from the current cursor position to the end of the line.
LineUp	Up Arrow	Move the cursor up one line
LineUpExtend	Shift + Up Arrow	Select the text from the current cursor position up one line.
LinkCopyFile		Link to a specified file descriptor from the File Designer.
ModifyKey		Change a key in the specified file descriptor in the File Designer.
New	Ctrl + N	Create a new project, source file, or file descriptor.
NewFD		Create a new data layout (.xlt) file.
NewLine	Ctrl + Shift + I	Insert a new line above the current cursor line.
OpenCopyFile		Open the designated COPY file.
OutputClear		Clear the contents of the Output Window.
OutputHistory		Display the output history of a file in the Output Window
PageDown	Page Down	Move the cursor down one page.
PageDownExtend	Shift + Page Down	Select the text from the current cursor position down one page.
PageUp	Page Up	Move the cursor up one page.

PageUpExtend	Shift + Page Up	Select the text from the current cursor position up one page.
Paste	Ctrl + V	Paste the selection from the clipboard to the active file.
ProjectProperty		Display the active projects properties in the Properties dialog box.
Property		Display the properties for the active object in the Properties dialog box.
Redo	Ctrl + Y	Reverse the most recent Undo operation.
RefreshDataFile		Refresh the current source file.
RefreshAllDataFile		Refresh all the workspace's source files.
ReloadCopyFile		Reload the COPY file for the active file.
RemoveCopyFile		Remove a COPY file from the active file.
ScrollDown		Scroll the Code Editor window down one line.
ScrollUp		Scroll the Code Editor window up one line.
SelectAll	Shift + A	Select all the elements in the active file.
SelectionCapitalize		Capitalize the selected text.
SelectionLowercase	Shift + U	Lowercase the selected text.
SelectionUppercase	Ctrl + Shift + U	Uppercase the selected text.
SequenceNumber		Generate the Sequence Number dialog box.

ToggleBookmarkPane		Toggle the display of the Bookmark pane.
ToggleFullPathName		Toggle the display of the full pathname in the window title bar.
ToggleLaunchToolbar		Toggle the display of the Launch toolbar.
ToggleLineNumberPane		Toggle the display of the Line Number pane.
ToggleOutputWindow		Toggle the display of the Output window.
ToggleProjectManager		Toggle the display of the Workspace window.
ToggleProjectToolbar		Toggle the display of the Project toolbar.
ToggleRulerBar		Toggle the display of the Ruler Bar.
ToggleStandardToolbar		Toggle the display of the Standard Toolbar.
ToggleStatusBar	Ctrl + Shift+ S	Toggle the display of the Staus Bar.
ToolsCustomize		Open the Customize dialog box.
ToolsOptions		Open the Options dialog box.
TransposeSourceFormat		Transpose the document display format between ANSI and terminal formats.
UncommentBlock		Remove comment symbols from the selected text.
Undo	Ctrl + Z	Reverse previous operations.
ViewFDFile		Display the selected FD file in the Code Editor.
ViewSLFile		Display the selected SL file in the Code Editor.
ViewXMLFile		Display the selected XML

		file in the Code Editor.
WindowArrangeIcons		Arrange the caption bars of minimized windows at the bottom of the screen.
WindowCascade		Arrange open windows in a cascading format.
WindowCloseAll		Close all open windows.
WindowNextPane	F6	Activate the next pane in a split window.
WindowPreviousPane	Shift + F6	Activate the previous pane in a split window.
WindowSplit		Split the open window.
WindowTileHorz		Tile the open windows horizontally.
WindowTileVert		Tile the open windows vertically.
WindowWindowsList		Generate the Windows list box showing all open windows.
WordLeft	Ctrl + Left Arrow	Move one word to the left.
WordLeftExtend	Ctrl + Shift +Left Arrow	Select one word to the left.
WordBackDelete	Ctrl + B	Delete the word to the left of the current cursor position.
WordDelete	Ctrl + D	Delete the word to the right of the current cursor position.
WordRight	Ctrl + Right Arrow	Move one word to the right.
WordRightExtend	Ctrl + Shift + Right Arrow	Select one word to the right.

9.3 Code Editor: Default Keyboard Shortcuts

Selecting **Code Editor** from the **Category** drop down list box in the **Tools -> Options -> Environment -> Keyboard** dialog box lists the keyboard shortcuts associated with the Code Editor environment.

The **Command** column in the table is the name assigned to the shortcut command.

The **Shortcut Key** column lists the keyboard key combination required to initiate the shortcut. A blank entry in this column denotes that the user must assign a keyboard key combination to use the shortcut.

The **Action** column describes the action that is performed when the shortcut is initiated.

COMMAND	SHORTCUT KEY	ACTION
BookmarkClearAll		Clear all bookmarks.
BookMarkNext		Move the cursor to the line containing the next bookmark
BookmarkPrev		Move the cursor to the line containing the previous bookmark.
BookmarkToggle		Toggle the display of a bookmark on the current line.
CharBackTab		Move the cursor back one tab stop.
CharLeft		Move one character to the left.
CharLeftExtend		Select one character to the left.
CharRight		Move one character to the right.
CharRightExtend		Select one character to the right.
CharTab		Move the cursor forward one tab stop.
Code Template	Ctrl + J	Opens the Code Template list dialog box
CommentBlock		Apply comment symbols to the selected block of text.

Copy		Copy the selection to the clipboard.
Cut		Cut the selection and move it to the clipboard.
Delete		Delete the selection.
DeleteBack		Delete the selected text or the character to the left of the cursor.
DeleteLine		Delete the selected line.
DocumentEnd		Move the cursor to the end of the document.
DocumentEndExtend		Select the text from the current cursor position to the end of the document.
DocumentStart		Move the cursor to the beginning of the file.
DocumentStartExtend		Select the text from the current cursor position to the start of the document.
FilePrint		Print the active file.
FilePrintPreview		Display full pages in print preview.
FileProperties		Display file properties in the Properties dialog box.
Find		Find the specified text in the active file.
FindNext		Find the specified text in the workspace or other designated directory.
FindPrev		Find the next occurrence of the specified text.
FindReplace		Find the previous occurrence of the specified text.
GotoLine	Ctrl + G	Move the cursor to the specified line of code.
Home		Move the cursor to the start of the current line.

HomeExtend		Select the text from the current cursor position in a line to the start of that line.
IndentToNext		Indent the selected line to match the indentation of the next line.
IndentToPrev		Indent the selected line to match the indentation of the previous line.
InsertMode		Toggle insert mode in the Code Editor.
LineDown		Move the cursor down one line.
LineDownExtend		Select the text from the current cursor position down one line.
LineEnd		Move the cursor to the end of the current line.
LineEndExtend		Select the text from the current cursor position to the end of the line.
LineUp		Move the cursor up one line
LineUpExtend		Select the text from the current cursor position up one line.
NexrTabPosition		Move the cursor to the next tab.
NewLine		Insert a new line above the current cursor line.
OpenCopyFile		Open the designated COPY file.
PageDown		Move the cursor down one page.
PageDownExtend		Select the text from the current cursor position down one page.
PageUp		Move the cursor up one page.
PageUpExtend		Select the text from the

		current cursor position up one page.
Paste		Paste the selection from the clipboard to the active file.
PreviousTabPosition		Move the cursor to the previous tab.
Redo		Reverse the most recent Undo operation.
ScrollDown		Scroll the Code Editor window down one line.
ScrollUp		Scroll the Code Editor window up one line.
SelectAll		Select all the elements in the active file.
SelectionCapitalize		Capitalize the selected text.
SelectionLowercase		Lowercase the selected text.
SelectionUppercase		Uppercase the selected text.
SequenceNumber		Open the Sequence Number dialog box.
TransposeSourceFormat		Transpose the document display format between ANSI and terminal formats.
UncommentBlock		Remove comment symbols from the selected text.
VerbBlockMatch		Move to the opposite end of a verb block command statement.
WordLeft		Move one word to the left.
WordLeftExtend		Select one word to the left.
WordBackDelete		Delete the word to the left of the current cursor position.
WordDelete	Ctrl + B	Delete the word to the right of the current cursor position.
WordRight	Ctrl + D	Move one word to the right.
WordRightExtend		Select one word to the right.

Glossary

API
Application Programming Interface: The API is an interface between an application and an operating system.
Binary Large Object (BLOB)
A large block of data stored in the database that is not stored as distinct records in a table. A BLOB cannot be accessed through the database in the same way as ordinary records. The database can only access the name and location of a BLOB; typically, another application is used to read the data.

Buffer
A buffer is an internal memory space (zone) where data is temporarily stored during input or output operations.

Client
A computer that can access and manipulate data that is stored on a central server computer.

Column
A set of data in a database table defined as multiple records consisting of the same data type.

Data dictionaries
Also known as extended file descriptors; they serve as maps (links) between database schema and the file descriptors in a COBOL application.

Directive
An optional comment placed in the COBOL code that sets the proceeding field or fields to a data type other than the default DCI setting.

Field
A part of a COBOL file descriptor roughly corresponding to a database column. It is a discrete data item contained in a COBOL record.

File Descriptor
A file descriptor is an integer that identifies a file that is operated on by a process. Operations that read, write, or close a file use the file descriptor as an input parameter.

Indexed file
Files containing a list of keys that uniquely identify all records.

Key
A unique value used to identify a record in a database. (See ***Primary Key*** for more details.)

Primary key
A primary key consists of a column of unique (or key) values , which can be used to identify individual records contained in a table.

Query
In DBMaker, SQL commands used to execute data query requests made by a user to obtain specific information.

Record
In COBOL, a group of related fields defined in the Data Division. In DBMaker, a record is also referred to as a row, and defines a set of related data items in table columns.

Relational Database
A relational database is a database system where internal database tables on different databases may be related to one another by the use of keys or unique indexes.

Schema
The structure of a database table as defined by its columns. Data type, size, number

of columns, keys, and constraints all define a table's schema.

Server

A server is a central computer that stores and handles network configuration files, which also can consist of a database management system to store data (database) and distribute data to clients via a network connection.

SQL

Structured Query Language: The language which DBMaker and other ODBC compliant programs use to access and manipulate data.

Table

A logical storage unit in a database that consists of columns and rows used to store records.

XFD file

An acronym for extended file descriptor or data dictionary. It also forms the file extension for the data dictionary.

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