

Object Browser for PowerBuilder

Version 10.5.0 Build 5A Release 4/13/2008

By Michael Nardella

<i>Object Browser for PowerBuilder v.10.5</i>	<i>1</i>
<i>Introduction</i>	<i>3</i>
<i>Object Browser Toolbar</i>	<i>5</i>
<i>Main Window</i>	<i>6</i>
<i>Object Filter</i>	<i>8</i>
<i>Class Viewer</i>	<i>9</i>
<i>Hiding the Toolbox</i>	<i>15</i>
<i>Editor</i>	<i>15</i>
<i>Object Syntax</i>	<i>16</i>
<i>Export Library Syntax</i>	<i>17</i>
<i>Object Dictionary</i>	<i>19</i>
<i>Search</i>	<i>20</i>
<i>Iterative Report</i>	<i>22</i>
<i>Please visit our website for information on downloading the product.</i>	<i>23</i>
http://www.level5software.net/	<i>23</i>

Introduction

Object Browser is an extension to the class browser which is supplied with PowerBuilder. It will help PowerBuilder developers visualize and analyze effective code, accessible functions and events, variables and structures for all PowerBuilder objects.

Object Browser facilitates searching, scanning, editing and printing of an object's definition and implementation, as well as its ancestor and nested objects, through a easy-to-learn graphical user interface.

This simple to use interface allows the developer to point and click through all of the critical object information without having to open multiple windows.

Functions, events, variables for the selected object, nested objects and ancestor objects are all within reach with just a single window. It's that easy.

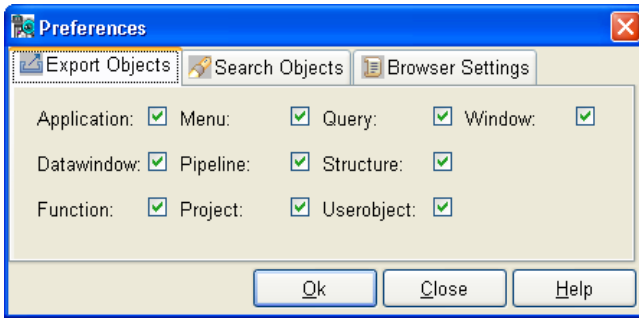
Object Browser also provides the ability to:

Features

- Browse function and event scripts.
- Browse variables and variable painter scripts.
- Browse attributes.
- Browse definition.
- Browse controls.
- Browse ancestor objects.
- Browse ancestor script.
- Browse object syntax.
- **New !!** Search object properties, scripts and variables.
- **New !!** Generate interactive statistics report for objects and scripts.
- Edit scripts and syntax and save the changes to a file.
- Print exceptional looking reports.
- Create documentation.
- Edit dw object syntax then IMPORT the syntax back into the PowerBuilder library.
- **New !!** Supports Pb 10.5 and 11 targets.
- **New !!** Added Scintilla: Source Code Editing Component. Copyright 1998-2003 by Neil Hodgson neilh@scintilla.org All Rights Reserved. The component adds the true PowerBuilder editor look and feel to the Class Browser, DW Syntax Viewer and File Editor .

Object Browser provides an EFFECTIVE, FAST and EASY way to Analyze, View, Edit and Archive all your PowerBuilder development assets.

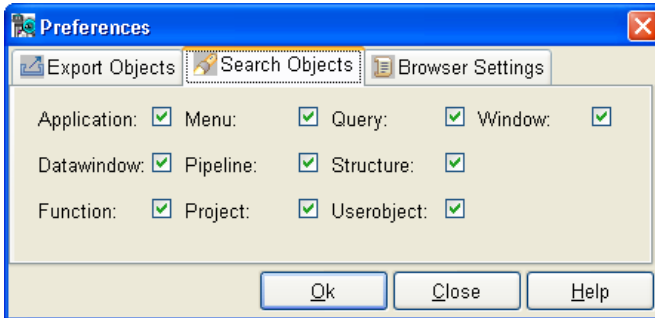
Export Objects Settings



Check the objects you wish to have exported when you use the Export Library Syntax utility.

Note: This is a Global Setting. Object Browser will document only the selected objects for all libraries.

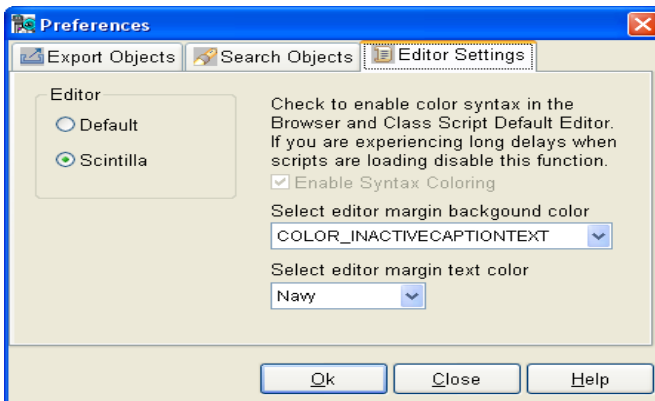
Search Objects Settings



Check the objects you wish to include when you use the Search Library utility.

Note: This is a Global Setting. Object Browser will include only the selected objects for the search..

Editor Settings



The product now ships with two editor components. The default editor is based on the Rich Text Edit PowerBuilder control. The second editor is Scintilla Source Code Editing Component by Neil Hodgson at neilh@scintilla.org and features a truly PB editor look and feel.

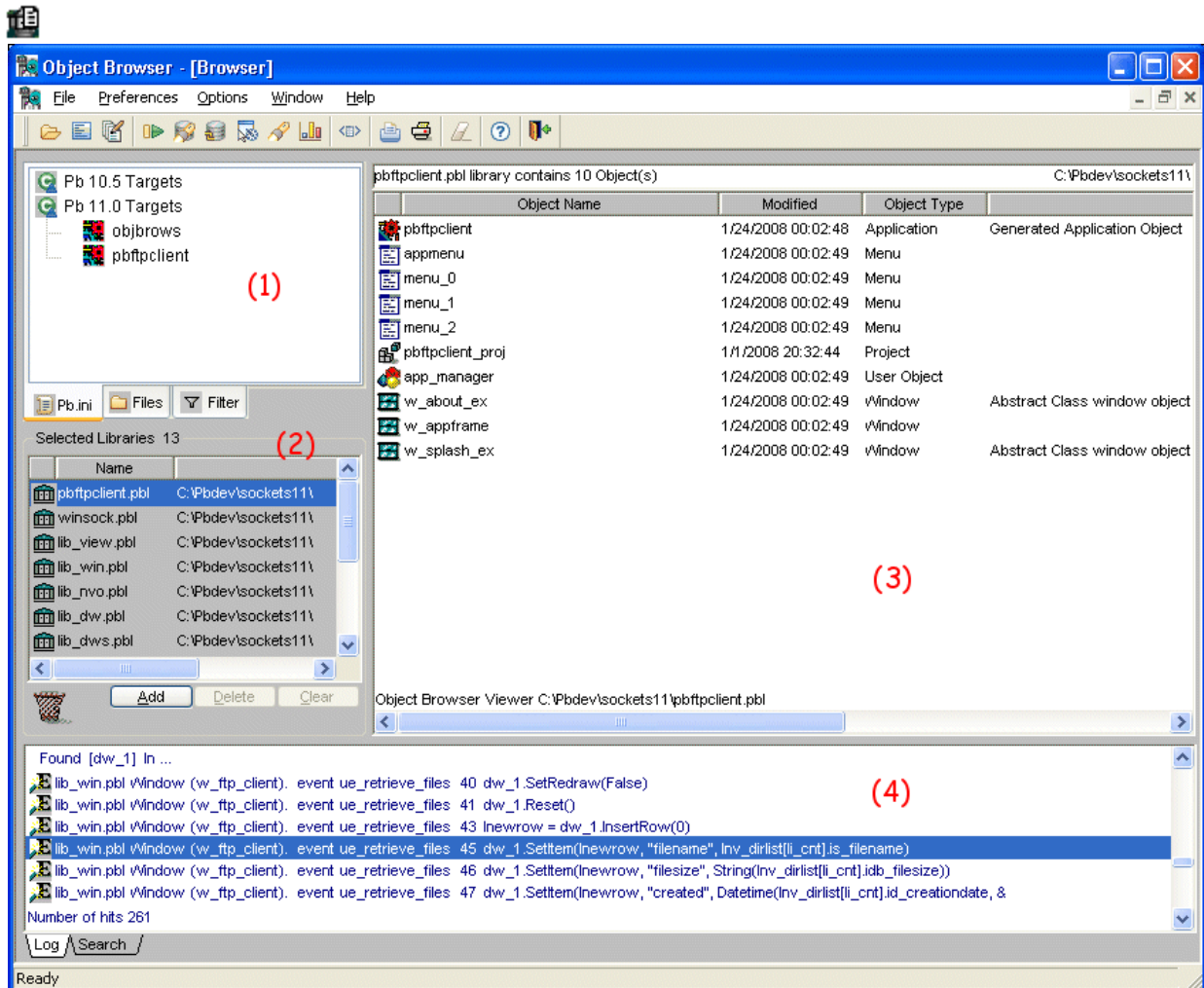
Object Browser Toolbar



Toolbar button description (Left to right)

- Open Object - Open Class viewer for the selected object.
- Open Syntax - Open Source viewer for the selected object.
- Open Editor - Open Text editor.
- Reset - Refresh the browser.
- Load Db - Loads all objects to an embedded database and checks for duplicate names.
- Check Duplicates - Checks for duplicate names.
- Export Lib - Export libraries to flat files.
- **New !!** Search - Advanced search for text in properties, scripts and variables.
- **New !!** Statistics - Interactive statistics reporting.
- Settings - Library export and search settings.
- Print
- Printer Setup
- Close
- Help

Main Window



Click the Class Browser toolbar button. This will display the main window.

The main window is partitioned into three sections:

- 1 PB Application Targets Tab, Files Tab, and Filter Tab
- 2 Selected Libraries (PB library list for the application)
- 3 Class objects for the selected library
4. Search results and log window.

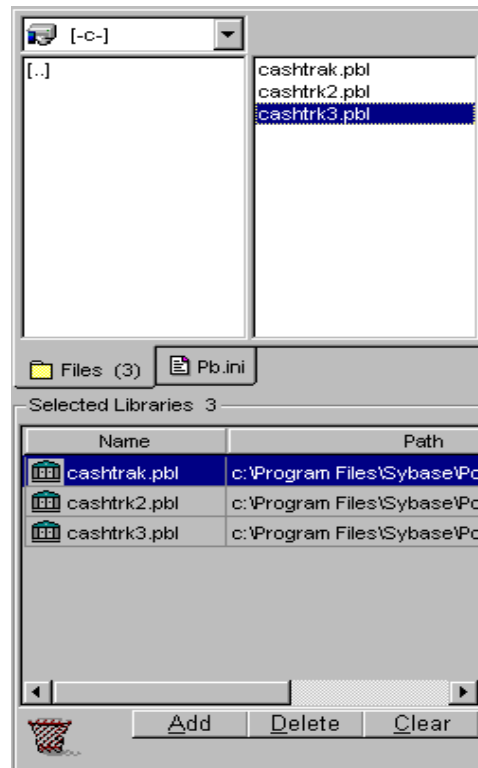
Selecting Application Libraries

If you have loaded application targets into a workspace within PowerBuilder all of the applications will be displayed in Section 1. Simply highlight the application you wish to browse then click the 'Add' button to build the library list which will display in Section 2.

Note: You can also double click on an application in Section 1 and the list will be displayed in

Section 2 without having to click the 'Add' button.

As an added feature you can also build an applications library list manually. Object Browser will automatically display the applications which are defined in your PB.INI file. However if applications are not defined within PowerBuilder you would need to go into the PowerBuilder IDE and define a new application. In lieu of having to open PowerBuilder and selecting an application then re-opening Object Browser to recognize it, you can simply Tab to Files (Section 1)



This will display the file system explorer in which you can manually specify the drive and directory of the PB libraries, which will display in the right section of the explorer. Once the files are displayed simply click the Add button to add them to the library list. This process is repeated until the library list is complete.

Note: When manually building the application's library list be sure to include all libraries necessary for the objects which may have external links to objects in other libraries. If an object has an external link to a library that was not added to the list, an application error will occur.

Displaying Library Objects

Selecting a library from the list in Section 2 will display its objects in the Class List (Section 3). Directly above the object list are indicators which display the current library, the number of objects and also the current library path.

appexamp.pbl library contains 64 Object(s) C:\Program Files\Sybase\PowerBuilder 7.0\PF\Examples\

Double clicking the object which will open the browser window.

The graphical browser window is opened by default for all objects excluding the following:

Query Data window (d_xxx) Pipeline Project

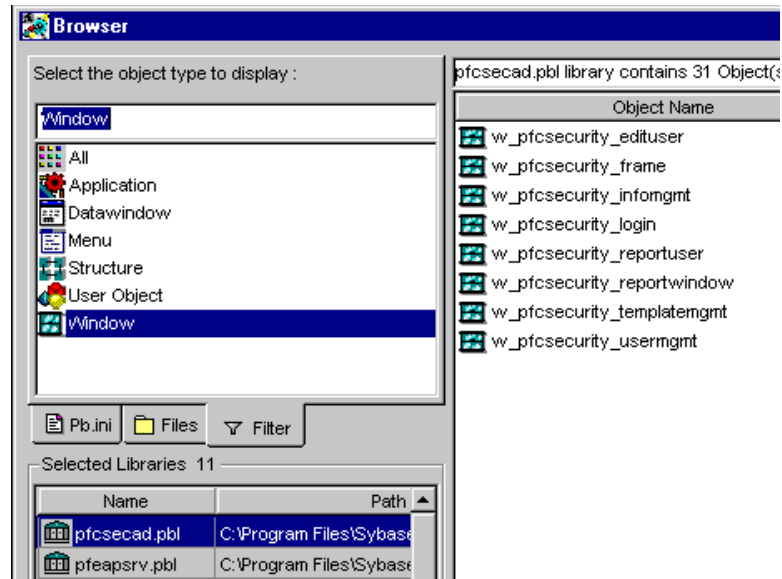
By default the syntax for these objects is opened in the standard text editor.

The graphical browser may also be opened by selecting the object in Section 3 then clicking the Open Object toolbar button.

The object syntax can be displayed for all PowerBuilder objects by selecting the object in Section 3 then clicking the Open Syntax toolbar button.

Object Filter

A new tab has been added to <Section 1> of the main window. The Filter tab displays the object filters available for the selected library.



Selecting one of the filters will display only that object type in the Class List (Section 3).
Selecting all will display all objects which is the default action.

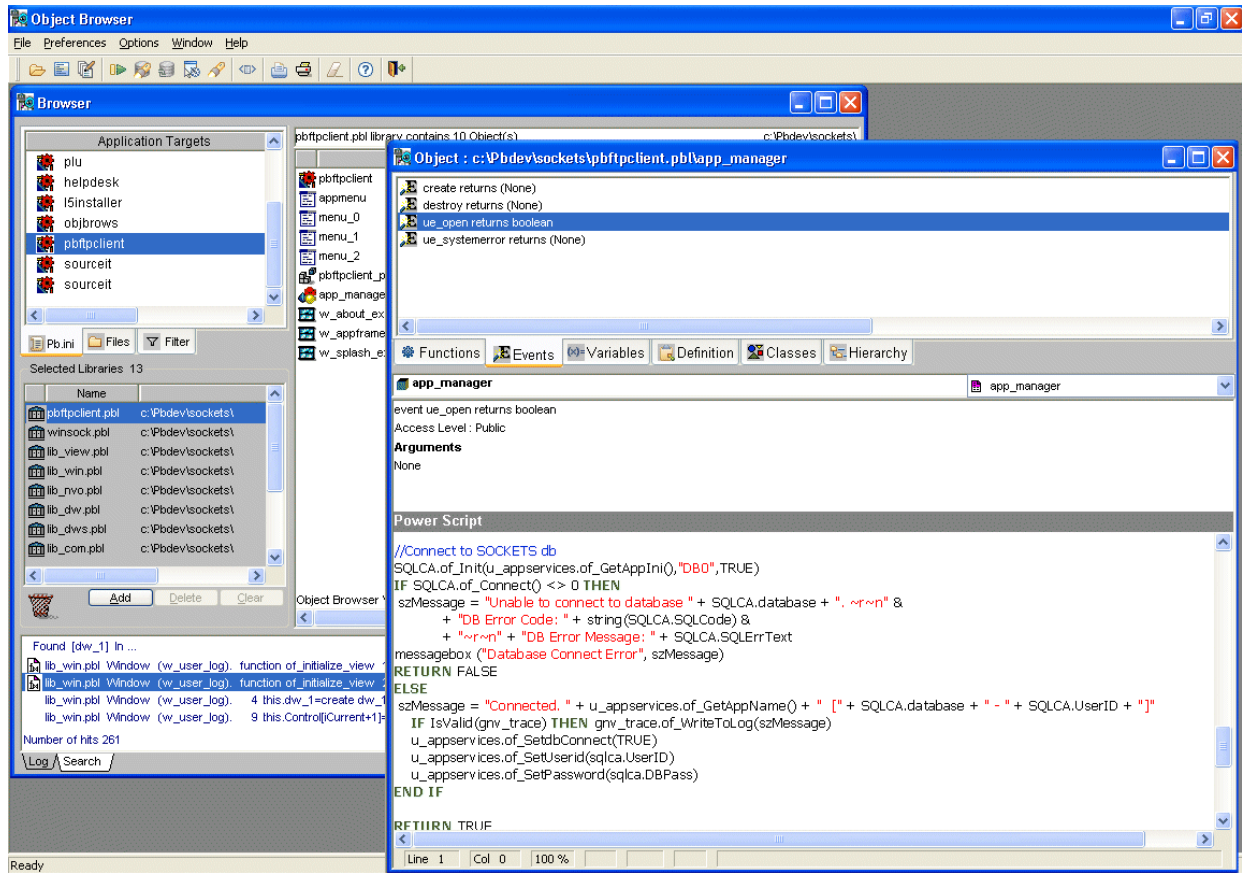
In the figure above the Window filter was selected which displayed only window type objects in the Class List.

This filter does not have any affect on the Export Library Syntax or Object Dictionary functions.

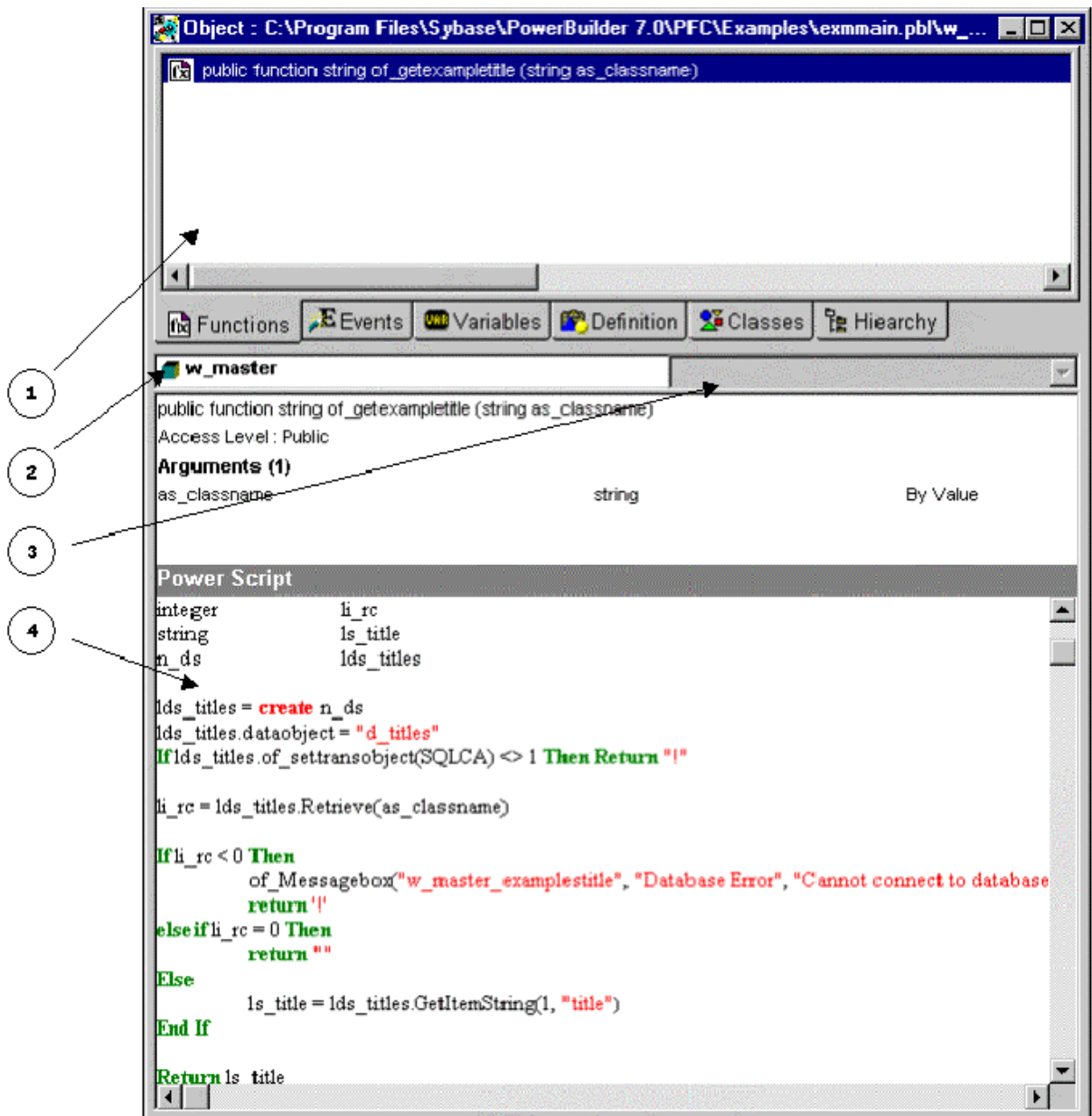
Class Viewer



Selecting an object in Object Browser's main window or search results window will open a graphical view of the Object's functions, events, variables and class definition.



Object window.



The window's components are:

- 1 Toolbox
- 2 Current Object Indicator
- 3 Ancestor script selector
- 4 Script Editor (Display only for Variables)

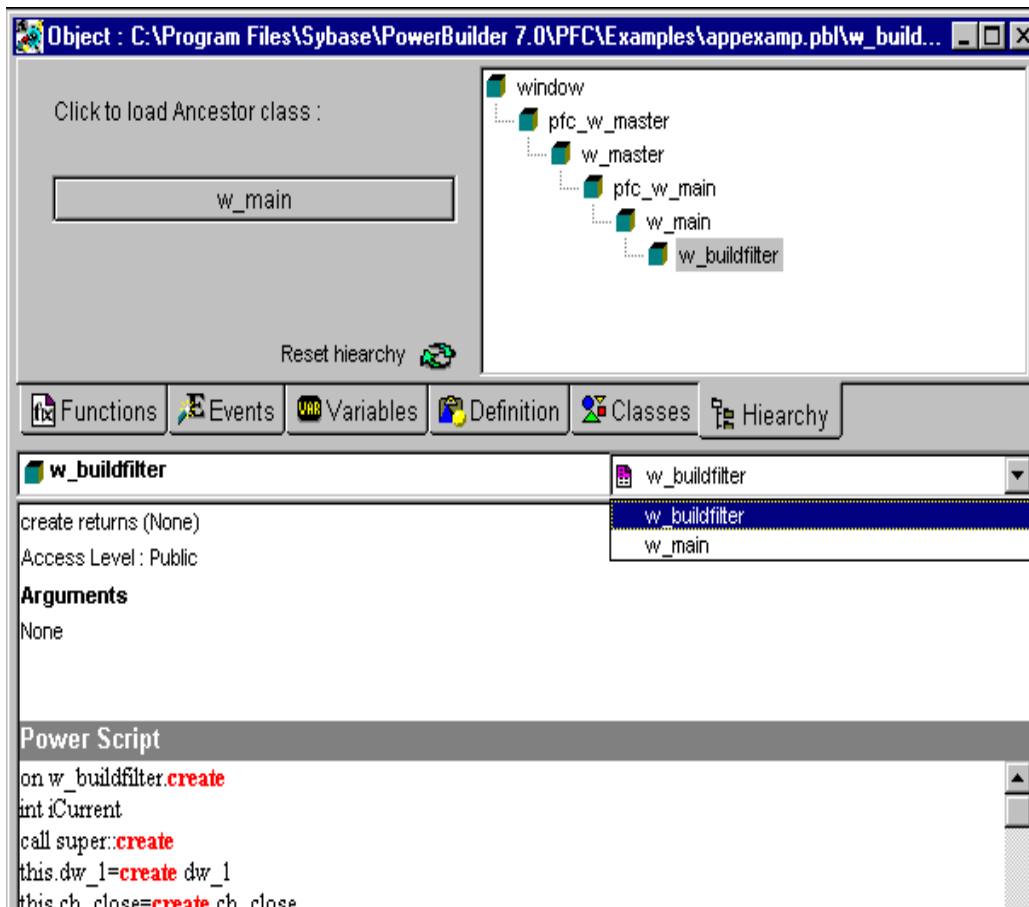
Toolbox

The toolbox is what you will use to navigate between the objects assets. You simply click on the tab which corresponds to information you wish to view or edit.

Functions, Events, Variables, Definition, Classes and Ancestors

Functions

To browse a function simply tab to 'Function' then click the appropriate function. The information for the function will be displayed in the editor.



Events

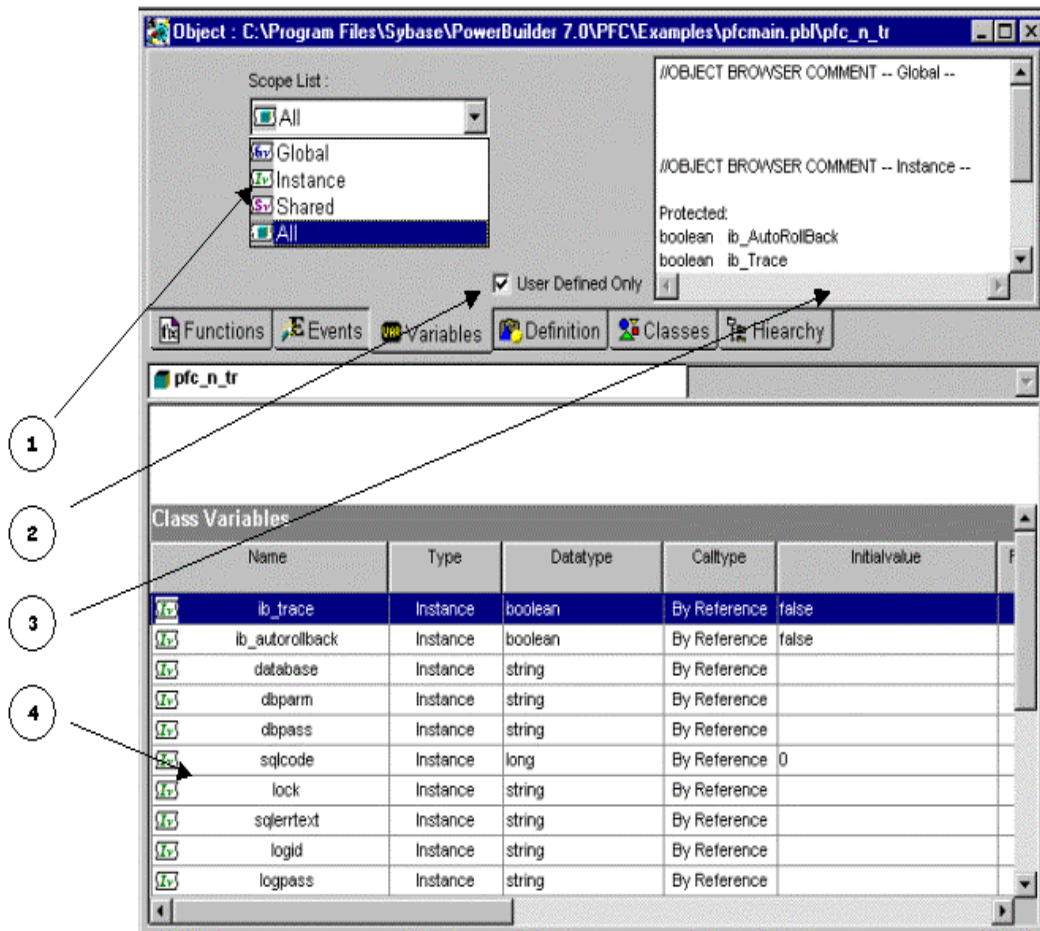
To browse an event simply tab to 'Events' then click the appropriate event. The information for the event will be displayed in editor.

The immediate ancestor script can be also displayed by selecting the ancestor class which is displayed in the drop down list. If the current object has an ancestor script the script icon will display half colored. If there is no ancestor script the icon will display one color (white).

In the above figure the current object is w_buildfilter and its immediate ancestor is w_main. Simple select w_main in the drop down list and its script will display above the current object script. This feature is useful when you need the ancestor script to be shown, along with the current script, to make sense of the ancestor/descendant logic.

Variables

To browse the objects variables tab to Variables. This information will be displayed as read only.



The Variables browser displays two screens of information:

Variable painter script. (3)

Variable definition (4)

Note : Variable painter script is available for objects only. This information will not be displayed for object's nested classes. Variable definition is available for both objects and object nested classes.

Variable Painter Script

This information is displayed exactly how it was entered in the variable painters within the PowerBuilder IDE. This feature has been added in order to display the comments which may have been added to describe the variable's meaning.

Variable Definition

This information fully describes an object's variable. It displays critical information such as Read and Write Access and whether or not the variable overrides its ancestor.

User defined variables will be displayed by default. Simply uncheck the 'User Defined Only' box (2) to display both user and system defined.

Scope List

Object Browser will report on the following scopes:

Global

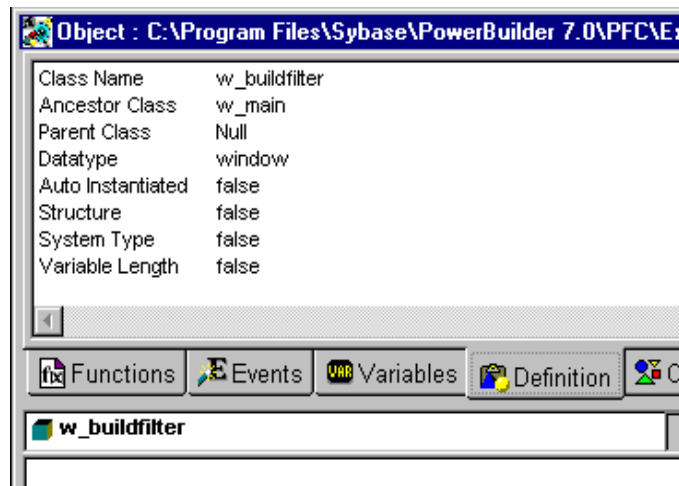
Instance

Shared

The default setting is 'All' scopes. To browse a specific scope select from the scope drop down list (1).

Class Definition

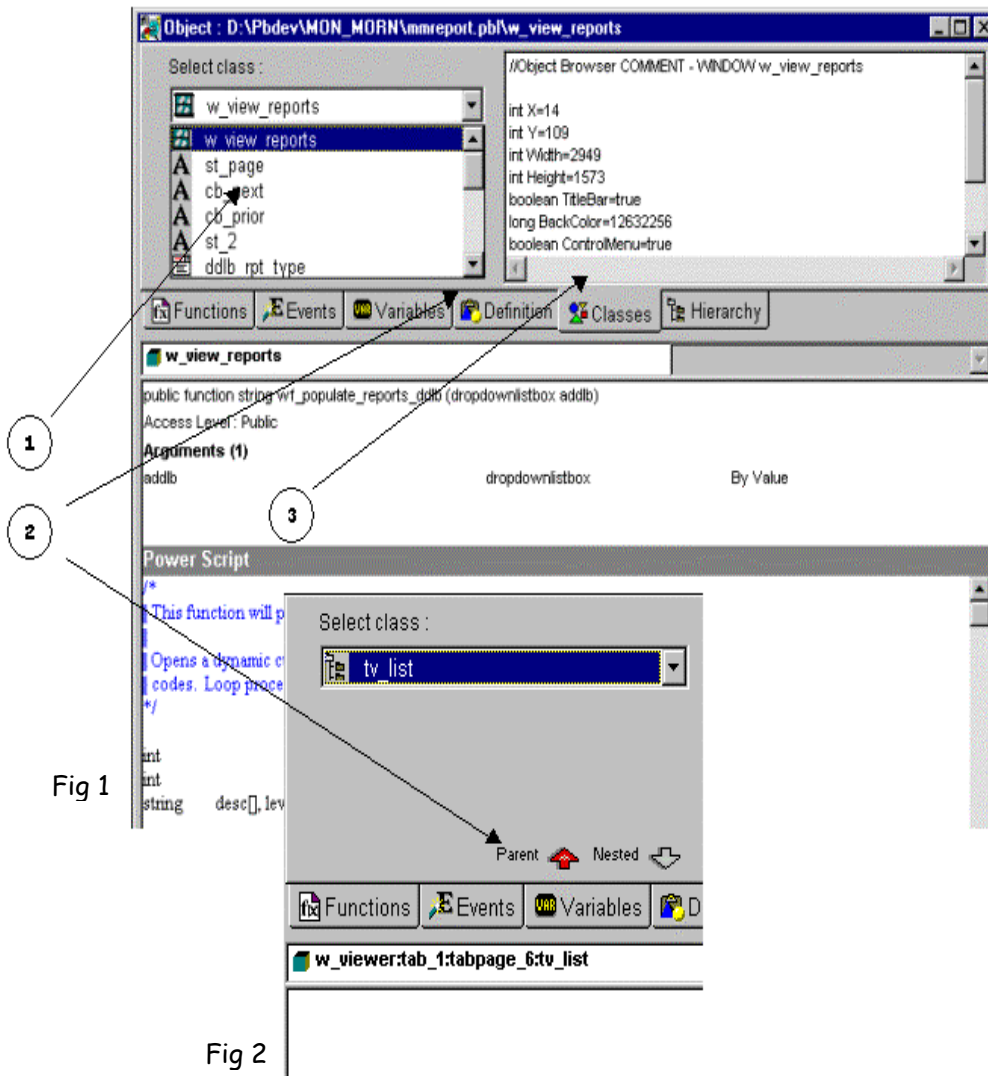
To browse the objects definition tab to 'Definition'.



This information will display in the toolbox only.

Nested Classes

If an object has controls the Object Browser will display the controls in the classes drop down list. The attributes for the current selected control will be displayed to the right of the class drop down list.



- 1.) Class selection.
- 2.) Nested or Parent class navigation.
- 3.) Attributes.

To display the class information for a control simply select a class from the Classes drop down list (fig 1). If the newly selected class has nested classes, a drill down pointer will display red. Click the down pointer as many times necessary to get to the desired nested class.

The above figure shows a tree view control which is painted on a tab page object. The tab page is painted on a tab control. The tab is a control on the w_viewer window object. Section 2 of the browser window will display the current nested level (fig 2.).

To drill up to a parent class click the drill up pointer. This pointer will display red as long as there are parent classes.

Ancestor Hierarchy

The object's ancestry tree can be viewed by selecting the Hierarchy Tab on the browser toolbox. The tree will display the object currently loaded in the browser. Clicking the ancestor button, immediately to the left of the tree, will load the ancestor object denoted on the button. The newly loaded object will be highlighted in the tree and the ancestor button text will now reflect the next ancestor object. You can navigate up the tree until the current object's immediate ancestor is the PowerBuilder System Class.

To reset the browser to the original object simply click Reset Hierarchy.

Other features

Some of the other features which Mr. Wizard mentioned are:

Printing

Reports can be printed for any of the toolbox assets. For function or event reports first select the appropriate tab then select the function or event. Select the Print toolbar menu item to print the report. Controls, Variables, Attributes and Definition reports can be printed by selecting tabs 3, 4 or 5 then selecting the Print toolbar menu item.

Editing function and event scripts.

If the script for a function or event is changed you can save the changes to a file by selecting the Save To File toolbar menu item.

Note: The changes made to a script within Object Browser for PowerBuilder will not be saved to the PowerBuilder library (.pbl file). The modified script will need to be pasted into the script painter in the PowerBuilder IDE.

Hiding the Toolbox

The toolbox can be toggled On/Off. This feature will enable you to view more of the object asset currently displayed in the edit control.

To hide or show the toolbox select the Hide/Show Toolbox menu item.

Editor



Clicking the Open Editor toolbar item will display an editor which can be used to open previously saved scripts and syntax for editing.

Select the Open File menu item to display the system folders dialog box. Select the path and file then click open. The file will be displayed in the editor. You may also right mouse click on the editor area to display a popup menu then select Insert Document which will display the system folders dialog box.

Note: The Menu Item Open File currently supports file extensions TXT and RTF. An error will occur if other file types are opened. The popup menu Insert Document will open other file types other than RTF however will display the file as TXT.

The opened file may be browsed and edited using popup menu functions:

Find Find Next Find Previous Replace Cut Copy Paste

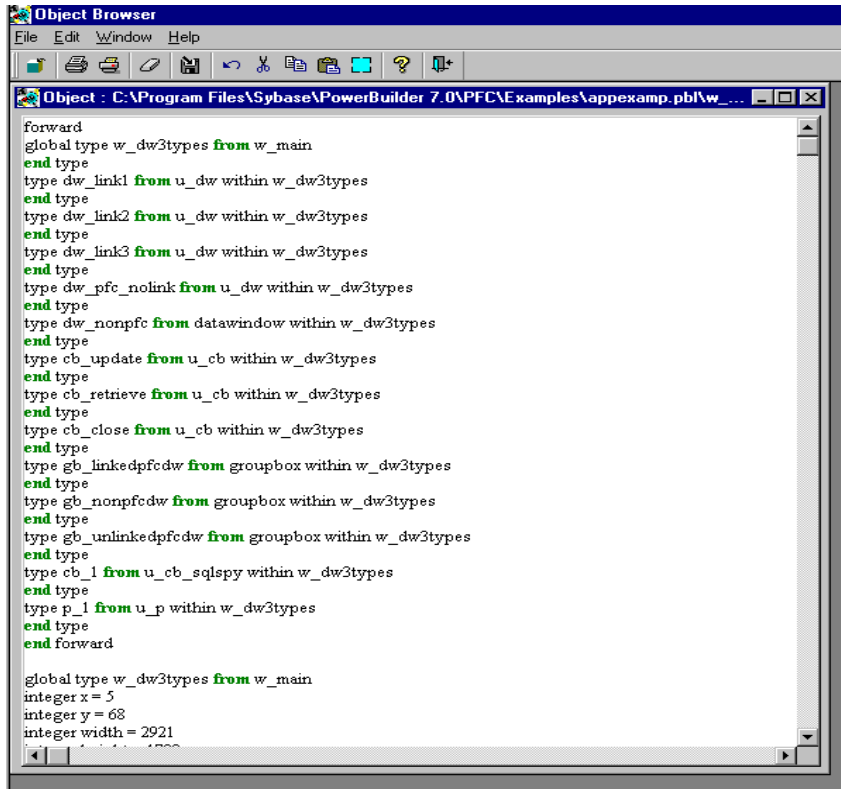
The file can then be printed and saved.

Object Syntax



Selecting an object in Object Browser's main window then clicking the Open Syntax toolbar item will display an editor with the objects syntax. This is the same syntax which is exported from the PowerBuilder Library Painter.

Components:



- (1) Editor
- (2) Popup menu
- (3) Toolbar Menu

The window will open with the objects syntax which can then be browsed and edited using popup menu functions:

Find	Find Next	Find Previous	Replace
Cut	Copy	Paste	Select All

The syntax also can be printed, edited and saved to a file.

Object syntax can be imported back into a PowerBuilder library. Currently this feature supports the DATAWINDOW object type only.

To import an object select the Import Object menu item. A message box will display to confirm the library import.

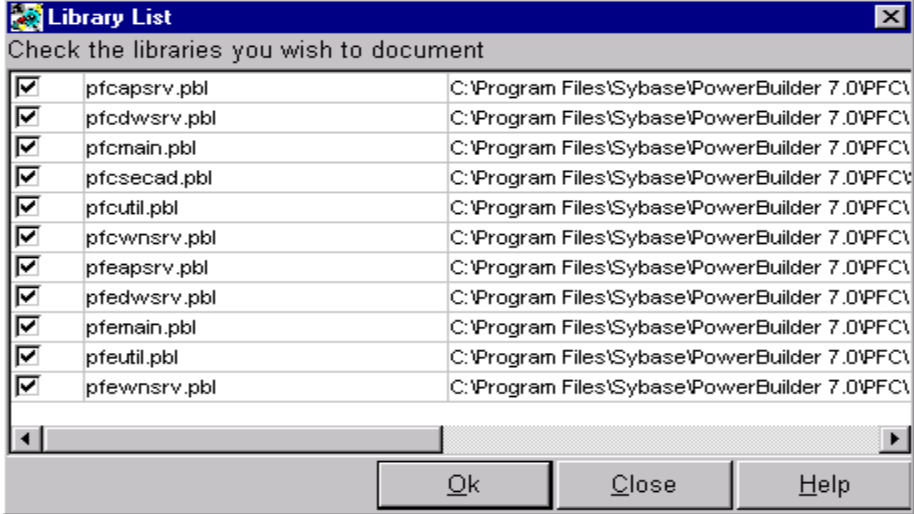
Choose YES to import the object.

Note: The object syntax can only be imported into its original library.

Export Library Syntax



Clicking the Export Library toolbar item will display the Library List dialog.



By default all libraries in the list will be checked. Uncheck the libraries you do not wish to export then click Ok. The objects contained within the selected libraries, and specified in Export Objects under User Settings, will be exported to folder:

C:\Program Files\Level 5 Software\Object Browser for PowerBuilder 10.5\Output\

The setup wizard created a shortcut to this folder on your desktop and startup menus for access to the files. The file name will be the library name with the TXT extension.

Note: Selecting the data window object in User Settings Export Objects can cause the file to be quite LARGE.

The generated file can be opened in the Object Browser Editor or any other document editor.

You can open the document into word processor which supports rich formatting and page setup such as headings and footers, page numbers, etc ... then save the file as part as your project documentation. We recommend using FONT Comic Sans MS (8 Pt) because it produces the best looking documents.

Notes can be placed in the header and footer of the document. One example is shown below:

Document header example: **My Application v.1.0 1/1/1999**

Document footer example: **Author's Name pg # Printed Date time**

Documenting the library syntax

Object Browser for Powerbuilder v.1.2 11/16/1999

Object Browser v.1.2 November 3, 1999 (Export Library Utility)

```

////////////////////////////////////
//App Name // objbrows
//Library // D:\Pbdev\OBJBROW\objbrow.pbl
//Date // 11/17/1999 12:33 AM
////////////////////////////////////
    
```

Table of Contents

1	Appl	11/16/99 18:57:45	objbrows
2	Data	10/12/99 00:55:54	dw_error
3	Data	11/16/99 23:32:20	d_variables_list
4	Data	10/10/99 16:27:29	d_userinfo
5	Data	10/3/99 12:43:43	d_source
6	Data	10/8/99 15:27:15	d_selected
7	Data	9/28/99 14:22:43	d_scriptdef_var
8	Data	11/9/99 09:36:10	d_scriptdef_func
9	Data	11/3/99 18:05:46	d_scriptdef_event
10	Data	9/28/99 14:14:10	d_scriptdef
			d_preview
			d_objectspreferred
			d_objectspref

```

#3
////////////////////////////////////
//Object //      d_variables_list
//Type //      Datawindow
//Library //      D:\Pbdev\OBJBROW\objbrow.pbl
//Comments//
//Modified//      11/16/99 23:32:20
////////////////////////////////////

release 7;
datawindow(units=0 timer_interval=0 color=16777215 processing=0 HTMLDOW=no print.documentname=""
print.orientation = 0 print.margin.left = 110 print.margin.right = 110 print.margin.top = 96 print.margin.bottom = 96
print.paper.source = 0 print.paper.size = 0 print.prompt=no print.buttons=no print.preview.buttons=no )
header(height=212 color="536870912")
summary(height=0 color="536870912")
footer(height=0 color="536870912")
detail(height=72 color="536870912")
table(column=(type-char(20))updatewhereclause=no name=rp_name db=
column=(type-char(20))updatewhereclause=no name=rp_kind dbname=b
    
```

```

public function long wf_initial_xprinting (datawindow p_dw, integer p_orientation, integer p_size, integer
p_source, boolean p_horizsplitscrollbar);string ls_orientation, ls_size, ls_source

IF Not IsValid(p_dw) THEN RETURN -1

ls_orientation      =      "datawindow.print.orientation" + string(p_orientation)
ls_size              =      "datawindow.print.paper.size" + string(p_size)
ls_source            =      "datawindow.print.paper.source" + string(p_source)

p_dw.modify(ls_orientation+ls_size+ls_source)

IF p_horizsplitscrollbar THEN
string lposition
lposition = p_dw.Describe("line_1x1")

IF integer(lposition) > 0 THEN p_dw.modify("Datawindow.HorizontalScrollSplit" + lposition)

END IF

RETURN 1
end function

public function boolean wf_msgbeforedelete (datawindow adw, long aco_number, string apurpose);long
ll_selected_row = 0, lvalue_id, lanswer
string ls_col_name, svalued, values_selected[], msg, stail, msgstr
int li_x

ll_selected_row = adw.GetSelectedRow(ll_selected_row)
    
```

The Export Library function is very fast. It will export a large library in less than a minute. Inserting the selected text from the exported file into a word document, changing the font then adding the header and footer information can also be done in a few minutes. The result is a complete and well presented document of the PowerBuilder Library.

This type of document has several advantages:

You can view the object variables, script, etc as well as the forward prototypes and declarations and class create and destroy listings.

The saved document can be used to reconstruct an object(s) at any time by importing the syntax into a PowerBuilder application using PowerBuilder's Library Painter.

The file can be opened and variables or script edited globally for all objects within the library. This would normally be performed by exporting, opening and editing each object within a library which can be very time intensive.

Object Dictionary

Clicking the Load Dictionary toolbar item will import all listed libraries into a database for duplication checking and reporting.

Select an application or build the library list manually as described in the Help topic Quick Start. Click the 'Load Dictionary' toolbar button. All objects contained within the listed library(s) will be imported into a database.

Note: When building a library list manually be careful not to select a library multiple times. This will produce erroneous duplication and reporting.



Once the objects are imported you can check for duplication by clicking the 'Check Duplicates' toolbar button.

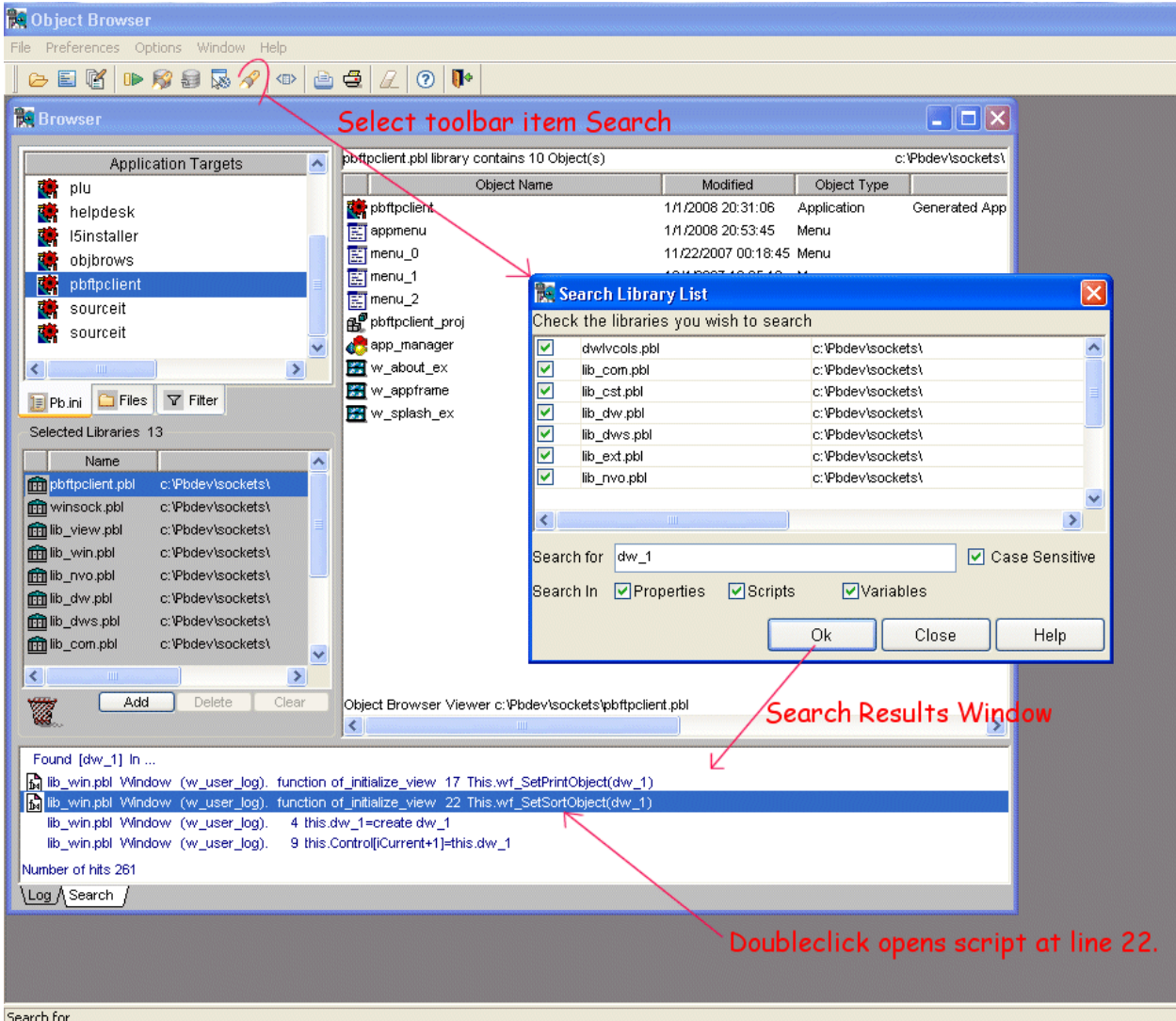
Note : This function will check for object name duplication ONLY.

If duplication is detected you will be prompted to print a report. Otherwise, a No Duplicate Objects found message will be displayed.

Search

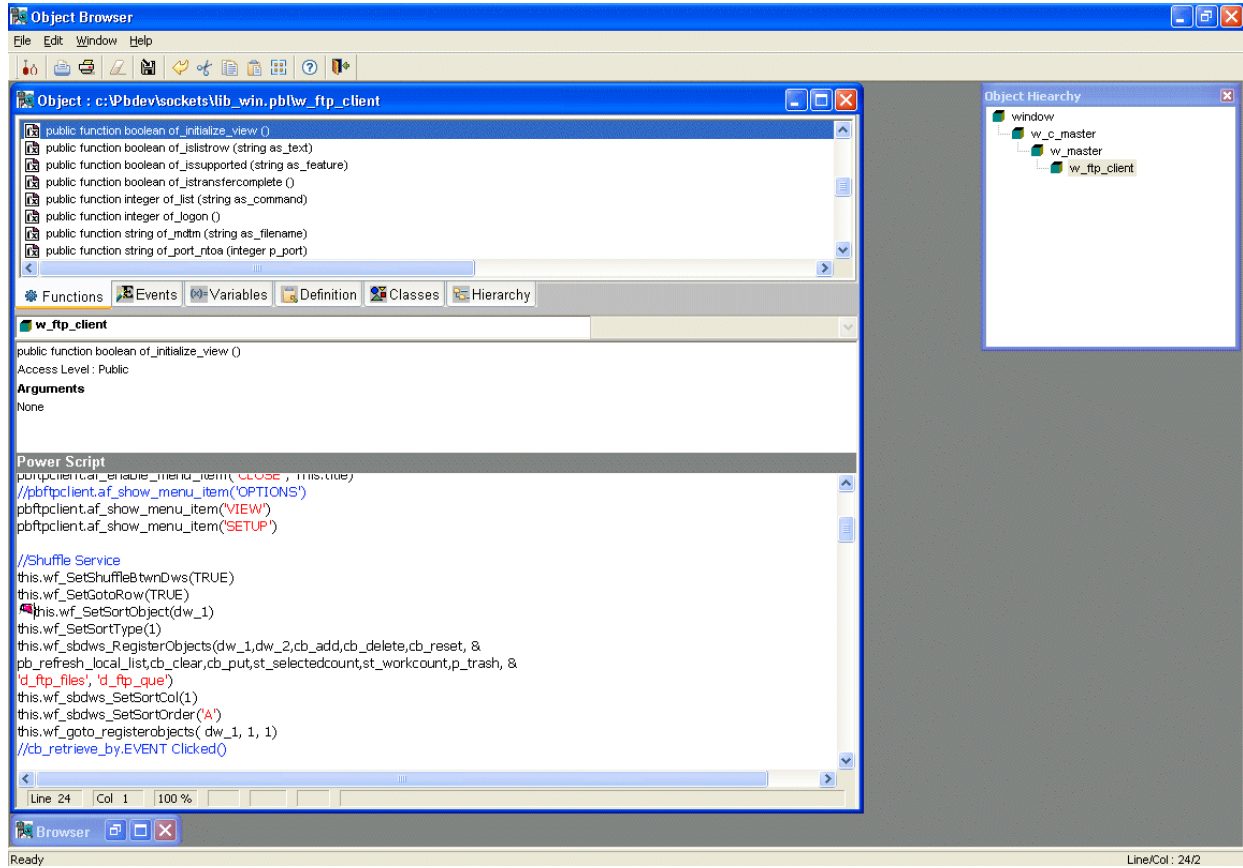


Clicking the Search toolbar item will display the Search Library List dialog.



- By default all libraries in the list will be checked.
- By default the search is case sensitive and will search in Properties, Scripts and Variables.
- Uncheck the libraries you do not wish to search in.
- Type what you are searching for in the Search for edit box.
- The results of the search will display in the Search tab window.
- Double click the search result item to open it in the object browser viewer.

Search (cont.)

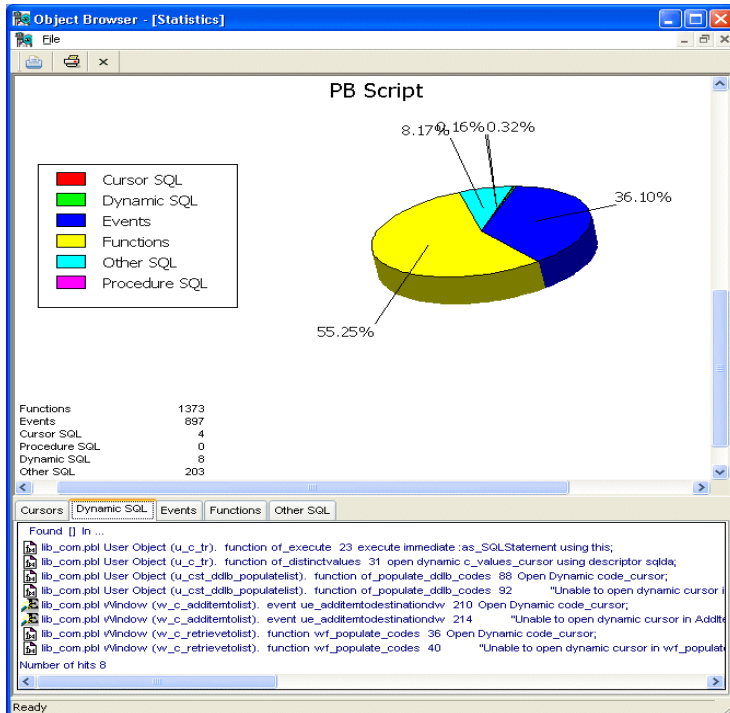


Selected search result is denoted with a red flag.

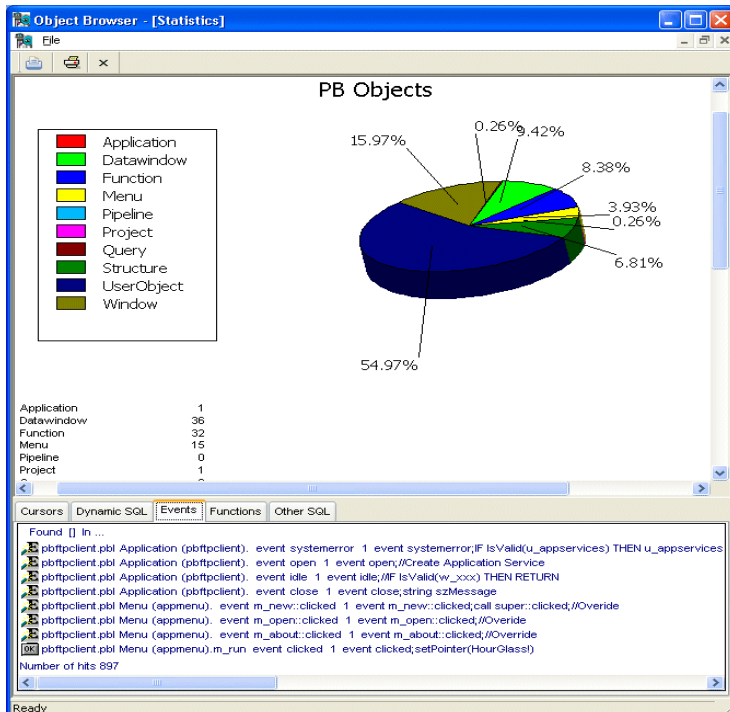
Interactive Report



Display statistics on objects and scripts.



Number of scripts by type.



Number of objects by type.

The detail of the report is displayed in tabs at the bottom of the report. (For scripts Only)
 Double click the detail record to open it in the class viewer.

Downloading Freeware Product

Please visit our website for information on downloading the product.

<http://www.level5software.net/>

A registration serial number will be sent with your order. Refer to topic Help-Quick Start-Registering your Product.

Product Support

Product Support for Object Browser is available to registered users through our website. Please note Object Browser for PowerBuilder Technical Support some where at the beginning of your message.

Please be sure to include the following items when contacting Product Support:

Product version you are using (See Help-About Menu)

Your full name

A brief description of the problem or request.

Website : <http://www.level5software.net/>

Please direct your technical support questions to: support@level5software.net

Please direct your customer service questions to : service@level5software.net

Legal

This software is protected by the United States Copyright laws and international treaty provisions. Unauthorized duplication or distribution of this software, in whole or in part, is prohibited. The Default Editor which ships with the product was written by Level5Software.net.

Third party software

Scintilla: Source Code Editing Component. Copyright 1998-2003 by Neil Hodgson neilh@scintilla.org All Rights Reserved

License for Scintilla

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation. NEIL HODGSON DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL NEIL HODGSON BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

pbEditor v.1.1: written by Roland Smith is free to distribute and available at www.topwizprogramming.com