
EXERCISE 17

The Select Files Form



Objectives:

- Write a PCL function which creates a form which contains a File Selection Widget.



Problem Description:

In this Exercise we write a PCL function which creates the **Select File Form**.

Suggested Exercise Steps:

- Write a PCL function using the online editor.
- Run the C pre-processor
- Compile the function
- Verify the PCL function

Exercise Procedure:

1. Either use vi or jot as the text editing tool. Open the file named *exercise_17.template*. It should already exist in your directory. Fill in the missing sections marked by:

```
***** # *****
```

2. After replacing the “.template” suffix with “.pcl”, compile the function.

Since the file contains define strings to locate the widgets, we need to run the c-preprocessor (cpp) against the file. To run the c-preprocessor type:

```
%/cpp -P -I/patran/patran3/customization select_file.pcl
      select_file.cpp
```

select_file.cpp should appear as a result.

3. Start the MSC/PATRAN compiler by typing:

p3pclcomp

Type **!!input select_file.cpp** in the command line of the compiler.

Resolve any compile errors by editing *select_file.pcl*, running the c-preprocessor and re-compiling in the compiler.

If there are no errors in the code then exit the compiler by typing “**exit**” or **ctrl-d**.

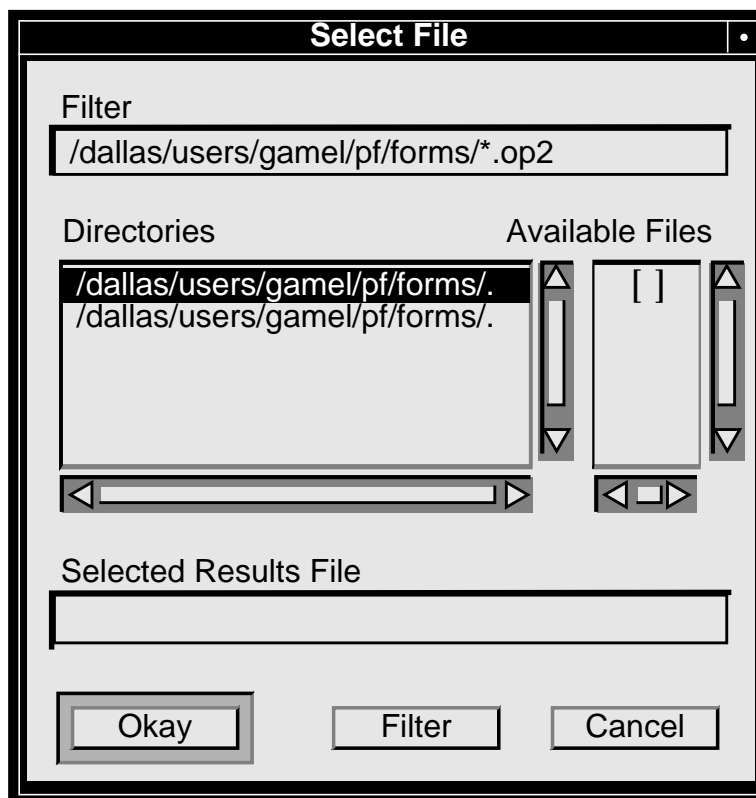
4. Test the function.

Enter **p3** at the UNIX prompt and in the MSC/PATRAN command window and enter the following commands:

```
!!input select_file.cpp
ui_exec_function("select_file","display")
```

5. Verify the result:

The following form should appear:



Sample Solution

```

/*$$h ANALYSIS - Select an Output File Name */
/*
* Purpose:
* Create the Analysis Select File Form for use by the Analysis
* Import Model and the Analysis Import Results Forms for the
* analysis code.
*
* Input:
* <none>
*
* Output:
* <none>
*
*/

#include "appforms.p"
#include "uiforms.p"

CLASS select_file

CLASSWIDE WIDGET selffile_form, res_frame_id, res_file_id

CLASSWIDE REAL file_height, form_height

CLASSWIDE STRING res_file_name[200]

FUNCTION init()

REAL file_width

/*
* Define the heights for the file selection form
*/

file_height = FILE_7L_HGT
form_height = FORM_2H_MARGIN + FRAME_2EDGE + file_height

file_width = FORM_WID_MED - FORM_2H_MARGIN - FRAME_2EDGE

```

```

/*
 * Create the Selected Analysis File Form
 */

selffile_form = ui_form_create(                                     @
/* callback */ "",                                             @
/* x */ ***** 1 *****                                     @
/* y */ ***** 1 *****                                     @
/* position */ "UL",                                           @
/* width */ FORM_WID_MED,                                       @
/* height */ ***** 1 *****                                   @
/* label */ "Select File",                                       @
/* iconname */ ***** 1 *****                                 )

/*
 * Create the file widget
 */

res_frame_id = ui_frame_create(                                    @
/* parent */ ***** 2 *****                                  @
/* callback */ ***** 2 *****                                  @
/* x */ FORM_L_MARGIN,                                           @
/* y */ FORM_T_MARGIN,                                           @
/* width */ file_width,                                          @
/* height */ ***** 2 *****                                  @
/* title */ ""                                                  )

res_file_id = ui_file_create(                                     @
/* parent */ ***** 3 *****                                  @
/* callback */ "select_file",                                     @
/* x */ ***** 3 *****                                       @
/* y */ ***** 3 *****                                       @
/* width */ file_width,                                          @
/* num_rows */ 7,                                               @
/* filter_label */ ***** 3 *****                             @
/* filter_mask */ ***** 3 *****                             @
/* dirs_label */ ***** 3 *****                               @
/* files_label */ ***** 3 *****                              @
/* selection_label */ "Selected Results File",                  @
/* selection */ "",                                             @
/* ok_label */ ***** 3 *****                                  @
/* filter_label */ "Filter",                                     @
/* cancel_label */ ***** 3 *****                             )

END FUNCTION /* init */

FUNCTION display

```

Exercise 17

```
ui_form_display( "select_file" )

ui_wid_save( ***** 4 ***** )

END FUNCTION /* display */

/* FUNCTION select_file(***** )
*
* Purpose:
* To save the file name and close the form
*
* Input:
*
* *****
* *****
*
* Output:
* <none>
*
*/

FUNCTION select_file( ***** 5 ***** )

STRING ***** 5 *****

/*
* We want to assign the value to classwide variable
* res_file_name so that get_res_file_name() works.
*/

IF (mode == "OPEN" ) THEN

***** 6 *****

ELSE

ui_wid_restore("select_file")
ui_form_hide("select_file")

END IF

END FUNCTION /* select_file */

FUNCTION get_res_file_name( res_file_name_text )
```

```

1)/* x */ FORM_X_LOC_LRG_NX2_SML,@
   /* y */ FORM_Y_LOC, @
   /* position */ "UL", @
   /* width */ FORM_WID_MED, @
   /* height */ form_height, @
   /* label */ "Select File", @
   /* iconname */ "" )

2)/* Parent */ selffile_form, @
   /* callback */ "", @
   /* x */ FORM_L_MARGIN, @
   /* y */ FORM_T_MARGIN, @
   /* width */ file_width, @
   /* height */ file_height, @

3)/* parent */ res_frame_id, @
   /* callback */ "select_file", @
   /* x */ 0.0, @
   /* y */ 0.0, @
   /* width */ file_width, @
   /* num_rows */ 7, @
   /* filter_label */ "Filter", @
   /* filter_mask */ .op2@
   /* dirs_label */ "Directories", @
   /* files_label */ "Available Files", @
   /* selection_label */ "Selected Results File",@
   /* selection */ "", @
   /* ok_label */ "Okay", @
   /* filter_label */ "Filter", @
   /* cancel_label */ "Cancel" )

4)ui_wid_save( "miracle_select_file" )

5)FUNCTION select_file( file_name, mode)
   STRING file_name[], mode[]

6)res_file_name = file_name

```

```

END CLASS /* miracle_select_file */

END FUNCTION /* get_res_file_name */

res_file_name_text = res_file_name

STRING res_file_name_text[]

```
