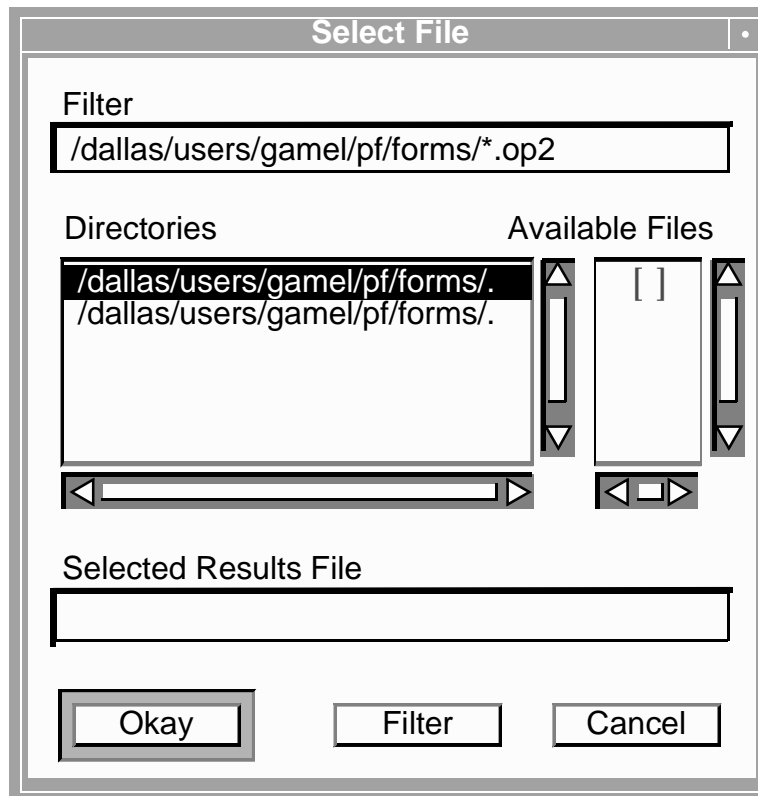

Exercise 17

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

Files:

All the files that are used in this exercise are listed below. Each list includes the file, where it originated, and a summary of information of how it relates to the exercise.

File	Supplied/Created	Description
exercise_17.template	Supplied	This file should already be in the pat304 directory.
select_file.pcl	Created	This file should be created after filling in the blank line of PCL code.

Exercise Procedure:

1. Use a text editor to 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 pre-processor (cpp) on the file. To run the C pre-processor consult exercise 13 for the machine specific commands. An example is shown below.

```
%/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 pre-processor and re-compiling in the compiler.

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

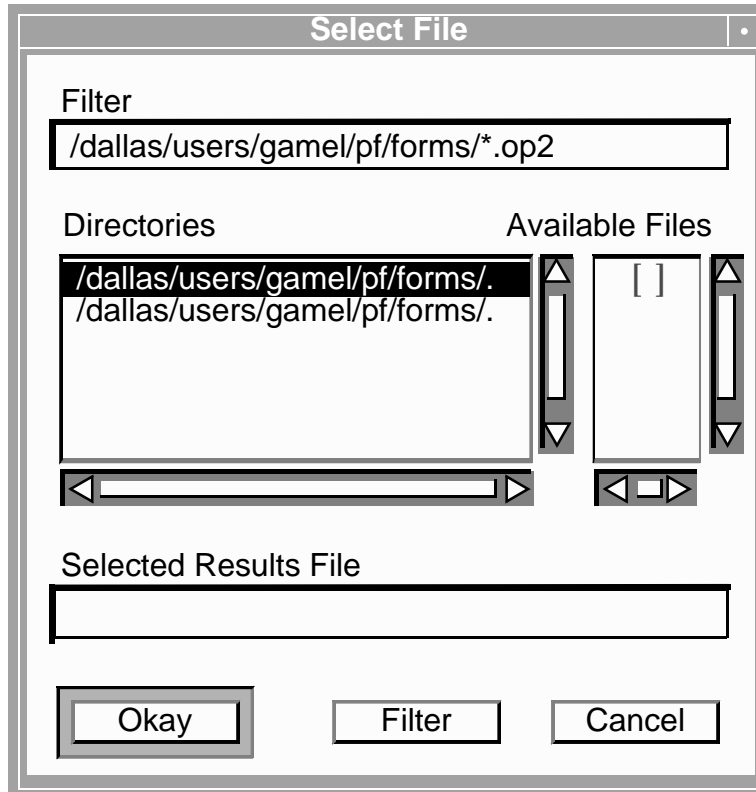
4. Test the function by running in MSC.Patran.

Enter **patran** at the UNIX window or dos command prompt. In the MSC.Patran command window 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

```

```

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 )

STRING res_file_name_text[]

```