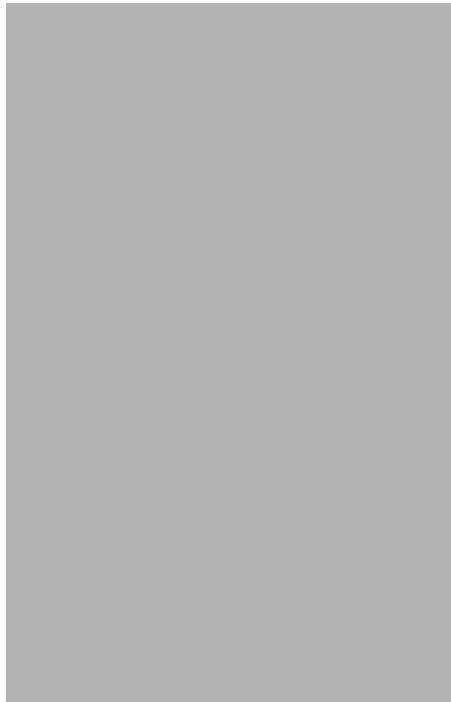




EXERCISE 11



Analysis Form Data Retrieval



Objectives:

- Write the Apply callback for the Analysis Form
- Retrieve Load Case and Convergence Tolerance data



Problem Description:

In this Exercise you will write the PCL function **miracle_analysis()** which retrieves the load case and convergence tolerance data to be used in the analysis job.

Suggested Exercise Steps:

- Write *miracle_analysis.pcl*.
- Compile *miracle_analysis.pcl* into **miracle.plb**
- Open a database and verify the analysis form callback.

Exercise Procedure:

Write the
callback for
the Analysis
Apply Button

1. Either use vi or jot as the text editing tool. Write **miracle_analysis.pcl** which contains a single class called apply.

We have provided a template file named **miracle_analysis_ex11.template** which you may edit in lieu of writing the *miracle_analysis.pcl* from scratch. Add the following lines to the beginning of the Apply function:

```

/*$$h ANALYSIS Miracle Analyze Job Function */
/*
* Purpose:
*   Get job control data ands pawn ob for a miraclea nalysis
*
* Input:
*   <none>
*
* Output:
*   <none>
*
* Side Effects:
*   A miracle analysis job is spawned.
*
*/

```

```

CLASS miracle_analysis

    CLASSWISE INTEGER cur_job_id, cur_param_set_id, cur_job_status
    CLASSWISE STRING cur_job_desc[256], cur_job_name[80]

    /*$$ FUNCTION apply
    * Purpose:
    *   To retrieve all pertinent widget data, write the job data to db
    *   and initiate the job submit procedure, if required.
    *
    * Input:
    *   <none>
    *
    * Output:
    *   <none>
    *
    * Action:
    *   Creates the jobfile, initiates the job submit procedure
    *
    */

FUNCTION apply

    GLOBAL REAL convergence_toler

    STRING analysis_code[32], dbname[132], @
           labels[80](3), analysis_type[80]
    STRING steps[80](1)
    STRING answer_file[200]
    STRING filespec[256]

    WIDGET lbox_id

    INTEGER db_get_status, positions(3), analysis_code_id, @
           analysis_type_id, status

    /*
    * Get the name of the currently open database
    */

```

Exercise 11

```
db_get_status = trans_get_db_name( dbname)

/*
 * Get the current analysis code, id and type of analysis
 */

analysis_main.get_code_and_type( analysis_code, analysis_code_id,@
                                analysis_type, analysis_type_id)

/*
 * Get current job info and menu items
 */

analysis_main.get_current_job_info( cur_job_name, cur_job_desc,@
                                    cur_job_id,cur_param_set_id,@
                                    cur_job_status)

analysis_main.get_analysis_menu_items( positions, labels)

/*
 * For "Read Results" action branch according to object
 */

IF (labels(1) == "Read Results File") THEN

    /*
     * Get the result filenames from the .ans file
     */

    analysis_select_file.get_res_file_name( answer_file)
> miracle_reverse_translate( answer_file,dbname)
ELSE

    /*
     * job information
     */
```

```

/*
 * Create a title if there is none
 */

IF ( STR_LENGTH( cur_job_desc) == 0) THEN
  padvancedfea_job_tasks.create_job_title( analysis_code, @
      analysis_type, cur_job_name, cur_job_desc)
END IF

/*
 * Load Case Selection
 */

/*
 * Get the selected loadcases
 */

*****1*****

*****1*****

dump steps(1)

END FUNCTION /* apply */

END CLASS /* miracle_analysis */

```

2. Add to the Apply class a call to *get_lc_widget* in class *miracle_loadcases* (exercise 3) to obtain the widget id for the loadcase list box(**lbox_id**).

Get the selected load case from the widget **lbox_id** and save it in **steps(1)**.

Add the statement **dump step(1)**.

Add the **END FUNCTION** and **END CLASS** statement to the end of the file.

3. Compile *miracle_analysis.pcl* into **miracle.plb**.

Type **p3** at the prompt and **<return>**.

Exercise 11

After the main menu and command window appear, type:

```
!!compile miracle_analysis.pcl into miracle.plb
```

Resolve any compile errors by editing **miracle_analysis.pcl** and re-executing the compile command.

4. Verify the load case selection.

Open database **miracle_tmpl.db** (from exercise 7). Select the **Analysis** radio button from the *Control Panel*.

Click the **Select Load Cases...** button.

Select **takeoff** from the *Load Cases* form.

Click **OK**.

Click **Apply**, The following should appear in the history window:

```
$# STRING [80] = "takeoff"
```

Solutions:

```
miracle_loadcases.get_lc_widget( lbox_id )  
ui_widget( lbox_id, "VALUE", steps(1) )
```