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/*************************************************************************************
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/* Program Name:     pulkit.jain_HW16.sas
                        */
/* Program Location: C:\Users\Pulkit
Jain\Documents\sasuniversityedition\myfolders\assign16 */
/* Date Created:     12/04/2017
                        */
/* Author:              Pulkit Jain
                       */
/* Purpose:             Assignment 16, Read from Raw Datafile
                     */
/*************************************************************************************
********/

/* 1 Use a fileref to access dat file, include headers*/
/* Create two libname statements;                                    */
/* Assign library to locaion of hw data with access only; */
/* Assign another library with read and write access;     */


filename andro '/folders/myfolders/hw_data/andromeda.dat';

libname hw_data '/folders/myfolders/hw_data' access=readonly;
libname pulkit16 '/folders/myfolders/assign16';

/* Specify a fileref to designate output of pdf */

filename HW16 '/folders/myfolders/assign16/pulkit.jain_HW16_output.pdf';

/* 2 Read and create datasest with 4 variables, Level, Name, Designation & Salary*/

/* Specify options for output pdf file */
ods pdf file = HW16 bookmarkgen=yes;
options dtreset;

data work.andro_data (Keep= Level Employee_Name Job_Title Salary);
      length Level 3 Employee_Name $25 Job_Title $25;
      infile andro truncover;
      * read in levels and check what category they belong to;
      input @1 row_st1 $8.
              @10 row_st2 $8.
              @19 row_st3 $8.
              @28 row_st4 $8.
              @37 row_st5 $8.
              @46 row_st6 $8.
              @;
      if row_st1 = '(Level1)' then do;
            Level = 1;
            input @10 employee_info $50. @;
      end;
      else if row_st2 = '(Level2)' then do;
            Level = 2;
            input @19 employee_info $50. @;
      end;
     else if row_st3 = '(Level3)' then do;
            Level = 3;
            input @28 employee_info $50. @;
      end;
      else if row_st4 = '(Level4)' then do;
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            Level = 4;
            input @37 employee_info $50. @;
      end;
      else if row_st5 = '(Level5)' then do;
            Level = 5;
            input @46 employee_info $50. @;
      end;
      else do;
            Level = 6;
            input @54 employee_info $50. @;
      end;
      input @106 Salary dollar10.0 @;
      * parse job title & employee name from the employee info variable;
      Job_Title = substr(employee_info, 1, find(employee_info,'(') - 1);
      Employee_Name = substr(employee_info, find(employee_info,'(') + 1);
      Employee_Name = compress(Employee_Name, ')');
run;


/* 3 Use Frequency Procedure on Job_Title */

PROC FREQ data = andro_data;
      tables Job_Title;
      title1 "Analysis of Andromeda Employee Data for Clean Up";
      title3 "Frequency Report of Job Title";
run;

/* 4 Use Univariate Procedure on Salary variable */

PROC univariate data = andro_data;
      var Salary;
      title1 "Analysis of Andromeda Employee Data for Clean Up";
      title2 "Analysis of Salary Values";
run;

/* 5 Print irregular salaries data */

PROC PRINT data = andro_data ;
      where  24000 > Salary  or Salary > 433800;
      title2 "Salary Values to be Investigated";
RUN;

/* 6 Clean Up the job titles conditionally */

data work.andro_clean;
    set work.andro_data;
    if Job_Title='Accountant i'
      then Job_Title='Accountant I';
    else if Job_Title='Accountant ii'
      then Job_Title='Accountant II';
    else if Job_Title='Accountant iii'
      then Job_Title='Accountant III';
    else if Job_Title='Warehouse Assistant i'
      then Job_Title='Warehouse Assistant I';
    else if Job_Title='Warehouse Assistant ii'
      then Job_Title='Warehouse Assistant II';
run;

/* 7 Use Freq procedure to show job titles in cleaned data*/
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proc freq data = work.andro_clean nlevels;
      table Job_Title / noprint;
      title1 "Number of Different Jobs in Cleaned Data";
run;

/* 8 Print Employees with titles Chief, Director, or Temp. or Vice President*/

/* Sort Data By Job level */
proc sort data = work.andro_clean;
      by Level;
RUN;

title "List of Andromeda Employees to be Reviewed for Orion Positions";

/* Print required observations */
proc print data=work.andro_clean;
  id Level;
  by Level;
  var Job_Title Employee_Name;
  where Job_Title like '%Chief%'  or
            Job_Title like '%Director%' or
            Job_Title like '%Temp.%'    or
            Job_Title like '%Vice President%';
run;

/* 9 Houskeeping to make sure title or footnote dont carry over */

title;
footnote;

/* 10 Close PDF Output */
ods pdf close;
ods listing;
```