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/* Creating MacroVariable of pathname and selecting the Orion directory */
%let path= /courses/d649d56dba27fe300/STA5067/SAS Data;
libname orion "&path/orion";

/* Question 1: Querying a Table
    a. Selecting all variables and observations from the table 'employee_payroll'
    b. subsetting the employee_Payroll table to include only four variables*/
Proc SQL;
    SELECT *
        FROM orion.Employee_Payroll;
    SELECT Employee_ID, Employee_Gender, Marital_Status, Salary
        FROM orion.Employee_payroll;
Quit;

/* Question 2: Calculating a Column
    a. Subset the employee_payroll table and create new var that is a proportion of salary called 'Tax' */
Proc SQL;
    SELECT Employee_ID, Employee_Gender, Marital_Status, Salary, Salary*.333 AS Tax
        FROM orion.Employee_payroll;
Quit;

/* Question 3: Conditional Processing
    -- Look at line 245 of CN for ref.
    -- Attempting to place conditions of the different observation types to subset them*/
Proc SQL;

    SELECT Employee_ID, Salary,
            CASE scan(Job_title, -1, ' ') /*needing a space in the quote for program to notice more than one word*/
                WHEN "Manager" THEN "Manager"
                WHEN "Director" THEN "Director"
                WHEN "Officer" THEN "Executive"
                WHEN "President" THEN "Executive"
                ELSE "NA"
            END AS Level,

            CASE /*needing to include calculated level by the when statement for code to recognize non-existing dat
                WHEN Calculated Level='Manager' AND Salary < 52000 THEN 'Low'
                WHEN Calculated Level='Manager' AND Salary ge 52000 AND Salary le 72000 THEN 'Medium'
                WHEN Calculated Level='Manager' AND Salary > 72000 THEN 'Large'

                WHEN Calculated Level='Director' AND Salary < 108000 THEN 'Low'
                WHEN Calculated Level='Director' AND Salary ge 108000 AND Salary le 135000 THEN 'Medium'
                WHEN Calculated Level='Director' AND Salary > 135000 THEN 'High'

                WHEN Calculated Level='Executive' AND Salary < 240000 THEN 'Low'
                WHEN Calculated Level='Executive' AND Salary ge 240000 AND Salary le 300000 THEN 'Medium'
                WHEN Calculated Level='Executive' AND Salary > 300000 THEN'High'
            END AS Salary_Range
    FROM orion.Staff
    WHERE Calculated Level NE 'NA'; /*This statement should make including 'NA' in 2nd case statement not needed*/
Quit;
proc print data=orion.staff; run;

/* Question 4: Eliminating Duplicates
    a. Writing a query that generates a report displaying cities where Orion Star employees reside.
        i. Including title
        ii. display unique cities without duplicates*/
title 'Cities Where Employees Live';
Proc SQL;
    Describe Table Orion.Employee_Addresses; /*Looking at variable names and type in table*/
    SELECT UNIQUE(City)
        FROM Orion.Employee_Addresses;
Quit;
title;

/* Question 5: Subsetting Data
    a. include donations >$90, employee ID, and Recipients, and total donations in table
    */
Proc SQL;
    Describe Table orion.Employee_donations; /*looking at table attributes*/
    SELECT Employee_ID, Recipients, qtr1+qtr2+qtr3+qtr4 AS Total
    FROM orion.Employee_donations
        WHERE CALCULATED total >90;
Quit;
```