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| **Name: Ayush Patel**  **Roll: A232**  **Semester: VII**  **Class: A**  **Branch: Btech IT (4th year)** |
| **Practical-5 Part A** |
| **Aim:** To Customize, Read SAS data sets and create permanent formats.  **a.** Write a SAS Program to performed following task   * Program to create SAS dataset Sale with 10 observations. * EmployeeID * FirstName * LastName * Gender * Qualification * Salary * Job Title[Manager, SalesManager, Sales Rep. I, Sales Rep. II etc] * Country * Birthdate * Hire Date       b. Create a dataset Subset for above scenario. To which dataset bonus variable belongs. Justify your answer.  c. Customize the output dataset by following statements  1. Drop statement to drop any four variables from output dataset.  2. Keep statement to include only 5 variables into output dataset.  3 Where statement to subset the observation with respect to hire\_date.  d. Create a new dataset StockDemo from SASHELP.stocks with facevalue in output dataset with 10% of open stock price and performed following task  1. Drop statement to drop any 3 variables from output dataset.  2. Keep statement to include only 3 variables into output dataset.  3 Create permanent format for stock variable to include only 2 characters for stock name.  4. Create permanent dollar format for open price and facevalue. |
| **Prerequisite:**Programming for Problem Solving |
| **Outcome:**To Reading and Writting SAS dataset and create permanent formats. |
| Theory: |
| **Procedure:**   1. Open SAS Studio and write the SAS program |
| **Instructions:**   1. Write source code of all stored procedure 2. Copy code & paste in code section of Part B. |
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| **Part B** |
| **Code:**  data sale;  input empid Fname $ Lname $ Gender $ Salary Qualification $ Jobtitle $ Birthdate ddmmyy8. Country $ Hiredate ddmmyy8.;  datalines;  1 Ayush Patel M 99099 Graduate Manager 16092000 USA 09092024  2 Dhruvil Patel M 40000 UnderGrad HR 15052000 IND 02012018  3 Dhyanesh Patel M 80000 UnderGrad SalesManager 02082000 IND 03012005  4 Ajay Dabas M 60000 Graduate SalesRep 16062000 USA 03012024  5 Pavitra Maheswari M 45000 UnderGrad SalesRep 04042000 IND 03012023  6 Tushar Agarwaal M 95000 UnderGrad SalesManager 03041999 AU 03102025  7 Sakura Haruno F 49500 PhD SalesRep 06011989 AU 03012024  8 Hinata Uzumaki F 90500 PhD Manager 08051995 USA 03122021  9 Snehil Raj M 65000 UnderGrad SalesRep 09012001 AU 03012010  10 Alankar Uniyal M 99000 Graduate SalesManager 10012002 AU 05062026  ;  /\*A\*/  proc print data=sale;  run;  data subset1;  set work.sale;  where Country='AU' and jobtitle contains 'Rep';  run;  proc print data=subset1;  run;  /\*B\*/  data subset1;  set work.sale;  bonus = salary\*0.10;  where hiredate > '01JAN2020'd;  run;  proc print data=subset1;  run;  /\*C\*/  /\*1\*/  data subset1;  set work.sale;  drop Gender Qualification Jobtitle Country;  run;  proc print data=subset1;  run;  /\*2\*/  data subset1;  set work.sale;  keep empid Fname Lname Birthdate Hiredate;  run;  proc print data=subset1;  run;  /\*3\*/  data subset1;  set work.sale;  where hiredate > '01JAN2020'd;  run;  proc print data=subset1;  format hiredate ddmmyy10.;  run;  /\*D\*/  /\*1\*/  data StockDemo;  set SASHELP.stocks;  facevalue = open\*0.10;  drop volume open adjclose;  run;  proc print data = StockDemo;  run;  /\*2\*/  data StockDemo;  set SASHELP.stocks;  facevalue = open\*0.10;  keep stock date open;  run;  proc print data = StockDemo;  run;  /\*3\*/  data StockDemo;  set SASHELP.stocks;  facevalue = open\*0.10;  format stock $2.;  run;  proc print data = StockDemo;  run;  /\*4\*/  data StockDemo;  set SASHELP.stocks;  facevalue = open\*0.10;  format open Dollar8.2 facevalue DOLLAR8.2;  run;  proc print data = StockDemo;  run; |
| **Output:**  **A)**      **B)**    **C)**  **1)**    **2)**    **3)**    **D)**  **1)**    **2)**    **3)**    **4)** |
| **Observation & Learning:**  Learned set statement and how to create permanent formats. |
| **Conclusion:**  Successfully created a dataset from a permanent dataset and customized the dataset according to the given conditions. |
| **Question:**  **Q1. What is SAS Format? Explain Syntax of SAS Format.**  **Ans.** A format is a layout specification for how a variable should be printed or displayed.  Syntax of SAS format:  **<$>format<w>.<d>**  where  $ -> indicates a character format.  format -> Names the SAS format.  w -> specifies the total format width, including decimal places and special characters.  . is required syntax. Formats always contain a period(.) as part of the name.  d -> specifies the number of decimal places to display in numeric formats.  **Q2. Explain difference between SAS format and user defined formats.**  **Ans.** SAS Format is generally used for formatting numbers like salary, date, etc. It has a predefined method to format variables. User Defined Formatting methods can be used to represent things like country codes for example – ‘M’ for Male, ‘F’ for Female, ‘AUS’ as Australia, etc.  **Q3. Explain different types of SAS inbuilt formats with examples.**  **Ans.** Some of Built-in SAS Formats are as follows:  (a) Character Formats  Eg.   |  |  |  | | --- | --- | --- | | **Format** | **Stored value** | **Displayed value** | | $4. | ayush | ayus |   (b) Numeric Formats  Eg.   |  |  |  | | --- | --- | --- | | **Format** | **Stored value** | **Displayed value** | | 12.2 | 27134.5864 | 27134.59 | | DOLLAR9.2 | 27134.5864 | $27134.59 |   (c) Date Formats  Eg.   |  |  |  | | --- | --- | --- | | **Format** | **Stored value** | **Displayed Value** | | MMDDYY10. | 0 | 01/01/1960 | | MMDDYY8. | 0 | 01/01/60 | | MMDDYY6. | 0 | 010160 | |