

```
%let path=/courses/d649d56dba27fe300/STA5067/SAS Data;
libname orion "&path/orion";
/**** 1.a ****/
proc print data=orion.customer_dim;
  var Customer_Group Customer_Name Customer_Gender Customer_Age;
  where Customer_Group contains 'Gold';
  title 'Gold Customers';
run;
/**** 1.b ****/
%let Type = Gold;
proc print data=orion.customer_dim;
  var Customer_Group Customer_Name Customer_Gender Customer_Age;
  where Customer_Group contains "&Type";
  title "&Type Customers";
run;
/**** 1.c ****/
options mcompilenote=all;
%macro Customers;
proc print data=orion.customer_dim;
  var Customer_Group Customer_Name Customer_Gender Customer_Age;
  where Customer_Group contains "&Type";
  title "&Type Customers";
run;
%mend Customers;
options mcompilenote=none;
/**** 1.d ****/
%let Type = Gold;
options mprint;
%Customers ;
options nomprint;
/**** 1.e ****/
%let Type = Internet;
/**** 1.f ****/
options mprint;
%Customers ;
options nomprint;
/**** 2.a ****/
proc means data=orion.staff sum mean;
  var Salary;
  class Job_Title;
  where Job_Title contains "Sales";
  title "Summary Statistics for the Sales Group";
run;
/**** 2.b ****/
%macro Sumstats ;
proc means data=orion.staff sum mean;
  var Salary;
  class Job_Title;
  where Job_Title contains "&Dep";
  title "Summary Statistics for the &Dep Group";
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run;
%mend ;
options mprint;
%let Dep = Sales;
%Sumstats
options nomprint;
/** 2.c */
options mprint;
%let Dep = Manager;
%Sumstats
options nomprint;

/** 3.a */
%macro Future;
%let DayMon = %substr(&sysdate9,1,5);
%let Year = %eval(%sysfunc(year("&sysdate9"d))-1);
%let FutureDate = &DayMon.&Year;
"list between &FutureDate and &sysdate9 ";
%mend Future;
/** 3.b */
proc print data=orion.customer_dim(obs=10);
  var Customer_Name Customer_Group;
  title "Date range of %Future";

/** 4.a */
%macro customer;
proc print data=orion.customer_dim;
  var Customer_Name Customer_Gender Customer_Age;
  where Customer_Group contains "&type";
  title "&type Customers";
run;
%mend customer;
/** 4.b */
options mprint;
%macro customer(type);
proc print data=orion.customer_dim;
  var Customer_Name Customer_Gender Customer_Age;
  where Customer_Group contains "&type";
  title "&type Customers";
run;
%mend customer;
options nomprint;
/** 4.c */
%customer(Gold)
/** 4.d */
%customer(Catalog)
/** 4.e */
options mprint;
%macro customer(type=Club);
proc print data=orion.customer_dim;
  var Customer_Name Customer_Gender Customer_Age;
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    where Customer_Group contains "&type";
    title "&type Customers";
run;
%mend customer;
options nomprint;
/**** 4.f ****/
%customer(type=Internet)
/**** 4.g ****/
%customer

/*****
/**** 5.a ****/
.....
proc sgplot data=orion.customer_dim;
    vbar Customer_Age_Group/
    fillattrs=( color=red transparency=.25);
run;
/**** 5.b ****/
options mprint;
.....
%macro plot(orientation=Vbar,color=red,Transparency=0.25);
proc sgplot data=orion.customer_dim;
    &orientation Customer_Age_Group/
    fillattrs=( color=&color transparency=&Transparency);
run;
%mend;
options nomprint;
/**** 5.c ****/
%plot
/**** 5.d ****/
%plot(orientation=Vbar,color=Blue,Transparency=0.5)
/**** 5.e ****/
%plot(Transparency=0.01)

/**** 6.a ****/
.....
%macro specialchars(name);
proc print data=orion.employee_addresses;
    where upcase(Employee_Name)="%upcase(&name)";
    var Employee_ID Street_Number Street_Name City State
        Postal_Code;
    title "Data for &name";
run;
%mend specialchars;
/**** 6.b ****/
%specialchars(%str(Abbott, Ray))

```