STAT 425 and STAT 625- Statistical Software

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Homework #4-SOLUTIONS

1. **Reading a Space-Delimited Raw Data File**

```
data work.qtrdonation;
   length IDNum $ 6;
   infile "&path\donation.dat";
   input IDNum $ Qtr1 Qtr2 Qtr3 Qtr4;
run;

proc print data=work.qtrdonation;
run;
```

2. **Reading a Delimited Raw Data File with Nonstandard Values**

```
data work.prices;
   infile "&path\pricing.dat" dlm='*';
   input ProductID StartDate :date. EndDate :date.
         Cost :dollar. SalesPrice :dollar.;
   format StartDate EndDate mmddyy10.
          Cost SalesPrice 8.2;
run;

title '2011 Pricing';
proc print data=work.prices;
run;
title;
```

3. **Reading a Delimited File with Missing Values**

```
data work.prices;
   infile "&path\prices.dat" dlm='*' missover;
   input ProductID StartDate :date. EndDate :date.
         UnitCostPrice :dollar. UnitSalesPrice :dollar.;
   label ProductID='Product ID'
         StartDate='Start of Date Range'
         EndDate='End of Date Range'
         UnitCostPrice='Cost Price per Unit'
         UnitSalesPrice='Sales Price per Unit';
   format StartDate EndDate mmddyy10.
          UnitCostPrice UnitSalesPrice 8.2;
run;

title '2007 Prices';
proc print data=work.prices label;
run;
title;
```

4. **Creating New Variables**

```
data work.birthday;
   set orion.customer;
   Bday2012=mdy(month(Birth_Date),day(Birth_Date),2012);
   BdayDOW2012=weekday(Bday2012);
   Age2012=(Bday2012-Birth_Date)/365.25;
   keep Customer_Name Birth_Date Bday2012 BdayDOW2012 Age2012;
```

```
   format Bday2012 date9. Age2012 3.;
run;

proc print data=work.birthday;
run;
```

5. **Creating Multiple Variables in Conditional Processing**

```
data work.season;
   set orion.customer_dim;
   length Promo2 $ 6;
   Quarter=qtr(Customer_BirthDate);
   if Quarter=1 then Promo='Winter';
   else if Quarter=2 then Promo='Spring';
   else if Quarter=3 then Promo='Summer';
   else if Quarter=4 then Promo='Fall';
   if Customer_Age>=18 and Customer_Age<=25 then  Promo2='YA';
   else if Customer_Age>=65 then  Promo2='Senior';
   keep Customer_FirstName Customer_LastName Customer_BirthDate
        Customer_Age Promo Promo2;
run;

proc print data=work.season;
   var Customer_FirstName Customer_LastName Customer_BirthDate Promo
       Customer_Age Promo2;
run;
```

6. **Creating Variables Unconditionally and Conditionally**

```
data work.ordertype;
   set orion.orders;
   length Type $ 13 SaleAds $ 5;
   DayOfWeek=weekday(Order_Date);
   if Order_Type=1 then
      Type='Retail Sale';
   else if Order_Type=2 then do;
      Type='Catalog Sale';
      SaleAds='Mail';
   end;
   else if Order_Type=3 then do;
      Type='Internet Sale';
      SaleAds='Email';
   end;
   drop Order_Type Employee_ID Customer_ID;
run;

proc print data=work.ordertype;
run;
```

7. **Reading a Tab-Delimited Raw Data File**

```
data work.managers2;
   length First Last $ 12 Title $ 25;
   infile "&path\managers2.dat" dlm='09'x;
   input ID First $ Last $ Gender $ Salary Title $;
   keep First Last Title;
run;

proc print data=work.managers2;
run;
```

8. **Reading a Delimited File with Missing Values and Embedded Delimiters**

```
data work.salesmgmt;
   length First Last $ 12 Gender $ 1 Title $ 25 Country $ 2;
   format BirthDate HireDate date9.;
   infile "&path\managers.dat" dsd dlm='/' missover;
   input ID First Last Gender Salary Title Country
         BirthDate :date. HireDate :mmddyy.;
run;

title 'Orion Star Managers';
proc print data=work.salesmgmt;
   var ID Last Title HireDate Salary;
run;
title;

  /* Alternate solution using informats */
data work.salesmgmt;
   format BirthDate HireDate date9.;
   infile "&path\managers.dat" dsd dlm='/' missover;
   input ID First :$12. Last :$12. Gender :$1. Salary Title :$25.
         Country :$2. BirthDate :date. HireDate :mmddyy.;
run;
```

9. **Using the CATX and INTCK Functions to Create Variables**

```
data work.employees;
   set orion.sales;
   FullName=catx(' ',First_Name,Last_Name);
   Yrs2012=intck('year',Hire_Date,'01JAN2012'd);
   format Hire_Date ddmmyy10.;
   label Yrs2012='Years of Employment in 2012';
run;

proc print data=work.employees label;
   var FullName Hire_Date Yrs2012;
run;
```

10. **Using WHEN Statements in a SELECT Group to Create Variables Conditionally**

```
data work.gifts;
   set orion.nonsales;
   length Gift1 $ 6 Gift2 $ 10;
   select(Gender);
      when('F') do;
         Gift1='Scarf';
         Gift2='Pedometer';
      end;
      when('M') do;
         Gift1='Gloves';
         Gift2='Money Clip';
      end;
      otherwise do;
         Gift1='Coffee';
         Gift2='Calendar';
      end;
      end;
      keep Employee_ID First Last Gender Gift1 Gift2;
run;
```

```
proc print data=work.gifts noobs;
run;
```