Harrison Katz

Homework 7

**Chapter 3**

Level 1:

7

6

South Africa

proc contents data=orion.\_all\_ nods;

run;

US\_SUPPLIERS

Level 2:

proc contents data=orion.staff;

run;

From looking at the variable section we can that we are looking at Employee\_ID using the ANSI character set

Challenge:

Autoexec.sas

It has in it the SAS accounts that are executed after SAS initializes. These statements can be used to call upon SAS programs automatically, create certain variables during the session, or set system options.

With a text editor

This can be used to set the path macro variable and to automatically submit a libname statement

**Chapter 4**

Level 1:

proc print data=orion.order\_fact noobs;

where Total\_Retail\_Price>500;

id Customer\_ID;

var Order\_ID Order\_Type Quantity Total\_Retail\_Price;

sum Total\_Retail\_Price;

run;

c)The numbers are not in a specific order (i.e. they’re not sequential).

Yes

d) one can check the log

e) Customer\_ID is now the let most column and is displayed on each line for an observation

f) There are two Customer\_ID columns.

Level 2)

proc print data=orion.customer\_dim noobs;

where Customer\_Age between 30 and 40;

id Customer\_ID;

var Customer\_Name Customer\_Age Customer\_Type;

run;

options ls=max;

proc print data=orion.order\_fact;

run;

options ls=96;

proc print data=orion.order\_fact headings=v;

run;

proc print data=orion.product\_dim width=uniform;

run;

b) each column has the same column width on all pages

c) using this option, PROC PRINT has to read through the enire data set twice

d) one can use a format on every column to explicity specify a field witdh so that proc print reads the data only once

**Chapter 5**

proc sort data=orion.employee\_payroll out=work.sort\_salary;

by Salary;

run;

proc print data=work.sort\_salary;

run;

6)

proc sort data=orion.employee\_payroll out=work.sort\_salary2;

by Employee\_Gender descending Salary;

run;

proc print data=work.sort\_salary2;

by Employee\_Gender;

run;

7)

proc sort data=orion.employee\_payroll out=work.sort\_sal;

by Employee\_Gender descending Salary;

run;

proc print data=work.sort\_sal noobs;

by Employee\_Gender;

sum Salary;

where Employee\_Term\_Date is missing and Salary>65000;

var Employee\_ID Salary Marital\_Status;

run;

8)

proc sort data=orion.orders out=work.custorders nodupkey

dupout=work.duplicates;

by Customer\_ID;

run;

title 'Unique Customers';

proc print data=work.custorders;

run;

title 'Duplicate Customer Observations';

proc print data=work.duplicates;

run;

title;

9)

title1 'Australian Sales Employees';

title2 'Senior Sales Representatives';

footnote1 'Job\_Title: Sales Rep. IV';

proc print data=orion.sales noobs;

where Country='AU' and Job\_Title contains 'Rep. IV';

var Employee\_ID First\_Name Last\_Name Gender Salary;

run;

title;

footnote;

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a)

title 'Entry-level Sales Representatives';

footnote 'Job\_Title: Sales Rep. I';

proc print data=orion.sales noobs label;

where Country='US' and Job\_Title='Sales Rep. I';

var Employee\_ID First\_Name Last\_Name Gender Salary;

label Employee\_ID="Employee ID"

First\_Name="First Name"

Last\_Name="Last Name"

Salary="Annual Salary";

run;

title;

footnote;

b)

title 'Entry-level Sales Representatives';

footnote 'Job\_Title: Sales Rep. I';

proc print data=orion.sales noobs split=' ';

where Country='US' and Job\_Title='Sales Rep. I';

var Employee\_ID First\_Name Last\_Name Gender Salary;

label Employee\_ID="Employee ID"

First\_Name="First Name"

Last\_Name="Last Name"

Salary="Annual Salary";

run;

title;

footnote;

11)

proc sort data=orion.employee\_addresses out=work.address;

where Country='US';

by State City Employee\_Name;

run;

title "US Employees by State";

proc print data=work.address noobs split=' ';

var Employee\_ID Employee\_Name City Postal\_Code;

label Employee\_ID='Employee ID'

Employee\_Name='Name'

Postal\_Code='Zip Code';

by State;

run;

5)

1) proc print data=orion.employee\_payroll;

var Employee\_ID Salary Birth\_Date Employee\_Hire\_Date;

format Salary dollar11.2 Birth\_Date mmddyy10.

Employee\_Hire\_Date date9.;

run;

2) title1 'US Sales Employees';

title2 'Earning Under $26,000';

proc print data=orion.sales label noobs;

where Country='US' and Salary<26000;

var Employee\_ID First\_Name Last\_Name Job\_Title Salary Hire\_Date;

label First\_Name='First Name'

Last\_Name='Last Name'

Job\_Title='Title'

Hire\_Date='Date Hired';

format Salary dollar10. Hire\_Date monyy7.;

run;

title;

footnote;

3) proc print data=orion.sales noobs;

var Employee\_ID First\_Name Last\_Name Job\_Title;

format First\_Name Last\_Name $upcase. Job\_Title $quote.;

run;

4) data Q1Birthdays;

set orion.employee\_payroll;

BirthMonth=month(Birth\_Date);

if BirthMonth le 3;

run;

proc format;

value $gender

'F'='Female'

'M'='Male';

value mname

1='January'

2='February'

3='March';

run;

title 'Employees with Birthdays in Q1';

proc print data=Q1Birthdays;

var Employee\_ID Employee\_Gender BirthMonth;

format Employee\_Gender $gender.

BirthMonth mname.;

run;

title;

6) proc format;

value $gender

'F'='Female'

'M'='Male'

other='Invalid code';

value salrange .='Missing salary'

20000-<100000='Below $100,000'

100000-500000='$100,000 or more'

other='Invalid salary';

run;

title1 'Salary and Gender Values';

title2 'for Non-Sales Employees';

proc print data=orion.nonsales;

var Employee\_ID Job\_Title Salary Gender;

format Salary salrange. Gender $gender.;

run; title;

6)

LIBRARY=

FMTSEARCH=

**Chapter 6**

1)

a) Customer\_Gender

M or F

data work.youngadult;

set orion.customer\_dim;

where Customer\_Gender='F' and

Customer\_Age between 18 and 36 and

Customer\_Group contains 'Gold';

Discount=.25;

run;

proc print data=work.youngadult;

var Customer\_Name Customer\_Age

Customer\_Gender Customer\_Group Discount;

id Customer\_ID;

run;

2)

data work.assistant;

set orion.staff;

where Job\_Title contains 'Assistant' and

Salary<26000;

Increase=Salary\*.10;

New\_Salary=Salary+Increase;

run;

proc print data=work.assistant;

id Employee\_ID;

var Job\_Title Salary Increase New\_Salary;

format Salary Increase New\_Salary dollar10.2;

run;

3)

data work.tony;

set orion.customer\_dim;

where Customer\_FirstName=\* 'Tony';

run;

proc print data=work.tony;

var Customer\_FirstName Customer\_LastName;

run;

4)

data work.increase;

set orion.staff;

where Emp\_Hire\_Date>='01JUL2010'd;

Increase=Salary\*0.10;

if Increase>3000;

NewSalary=Salary+Increase;

label Employee\_ID='Employee ID'

Salary='Annual Salary'

Emp\_Hire\_Date='Hire Date'

NewSalary='New Annual Salary';

format Salary NewSalary dollar10.2 Increase comma5.;

keep Employee\_ID Emp\_Hire\_Date Salary Increase NewSalary;

run;

proc print data=work.increase split=' ';

run;

5)

data work.delays;

set orion.orders;

where Order\_Date+4<Delivery\_Date

and Employee\_ID=99999999;

Order\_Month=month(Order\_Date);

if Order\_Month=8;

label Order\_Date='Date Ordered';

Delivery\_Date='Date Delivered'

Order\_Month='Month Ordered';

format Order\_Date Delivery\_Date mmddyy10.;

keep Employee\_ID Customer\_ID Order\_Date Delivery\_Date

Order\_Month;

run;

proc contents data=work.delays;

run;

proc print data=work.delays;

run;

6)

data work.bigdonations;

set orion.employee\_donations;

Total=sum(Qtr1,Qtr2,Qtr3,Qtr4);

NumQtrs=n(Qtr1,Qtr2,Qtr3,Qtr4);

if Total<50 or NumQtrs<4 then delete;

label Qtr1='First Quarter'

Qtr2='Second Quarter'

Qtr3='Third Quarter'

Qtr4='Fourth Quarter';

drop Recipients Paid\_By;

run;

proc contents data=work.bigdonations;

run;

proc print data=work.bigdonations label noobs;

run;

**Chapter 9**

1) data work.increase;

set orion.staff;

Increase=Salary\*0.10;

NewSalary=sum(Salary,Increase);

/\* alternate statement is \*/

/\* NewSalary=Salary+Increase; \*/

BdayQtr=qtr(Birth\_Date);

keep Employee\_ID Birth\_Date Salary Increase NewSalary BdayQtr;

format Salary Increase NewSalary comma8.;

run;

proc print data=work.increase label;

run;

2)

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;

3)

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;

4)

data work.ordertype;

set orion.orders;

length Method $ 8;

if Order\_Type=1 then Method='Retail';

else if Order\_Type=2 then Method='Catalog';

else if Order\_type=3 then Method='Internet';

else Method='Unknown';

run;

proc print data=work.ordertype;

var Order\_ID Order\_Type Method;

run;

5)

data work.region;

set orion.supplier;

length Region $ 17;

if Country in ('CA','US') then do;

Discount=0.10;

DiscountType='Required';

Region='North America';

end; else do;

Discount=0.05;

DiscountType='Optional';

Region='Not North America';

end;

keep Supplier\_Name Country

Discount DiscountType Region;

run;

proc print data=work.region;

run;

6)

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;

7) 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;

8)

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;

**Chapter 10**

1. 10 observations, 12 observations, 10 observations

data work.thirdqtr;

set orion.mnth7\_2011 orion.mnth8\_2011 orion.mnth9\_2011;

 run;

proc print data=work.thirdqtr;

run;

1. orion.sales: First\_Name, Last\_Name

orion.nonsales: First, Last

proc contents data=orion.sales;

run;

proc contents data=orion.nonsales;

run;

data work.allemployees;

set orion.sales

orion.nonsales(rename=(First=First\_Name Last=Last\_Name));

keep Employee\_ID First\_Name Last\_Name Job\_Title Salary;

run;

proc print data=work.allemployees;

run;

3) proc contents data=orion.charities;

run;

proc contents data=orion.us\_suppliers;

run;

proc contents data=orion.consultants;

run;

data work.contacts;

set orion.charities orion.us\_suppliers;

run;

proc contents data=work.contacts;

run;

data work.contacts2;

set orion.us\_suppliers orion.charities;

run;

proc contents data=work.contacts2;

run;

data work.contacts3;

set orion.us\_suppliers orion.consultants;

run;

c) the first data set in the set statement, orion.charities

e) the first data set in the set statement, orion.us\_suppliers

f) contacttype has been defined twice (as both character and numeric)

4)

proc contents data=orion.orders;

run;

proc contents data=orion.order\_item;

run;

data work.allorders;

merge orion.orders

orion.order\_item;

by Order\_ID;

keep Order\_ID Order\_Item\_Num Order\_Type

Order\_Date Quantity Total\_Retail\_Price;

run;

proc print data=work.allorders noobs;

where Order\_Date between '01Oct2011'd and '31Dec2011'd;

run;

/\* alternate solution \*/

proc print data=work.allorders noobs;

where Order\_Date>='01Oct2011'd and Order\_Date<='31Dec2011'd;

run;

proc print data=work.allorders noobs;

where qtr(Order\_Date)=4 and year(Order\_Date)=2011;

run;