Exercise 1

Run the program L3_E1.sas

Which of the following is true?

a. The program executes, and applies both WHERE conditions successfully.

b. The program fails and an error message is written to the log.

c. The program executes, but only the first WHERE condition is applied.

d. The program executes, but only the second WHERE condition is applied.

Exercise 1 solution

Which of the following is true?

a. The program executes, and applies both WHERE conditions successfully.

b. The program fails and an error message is written to the log.

c. The program executes, but only the first WHERE condition is applied.

d. The program executes, but only the second WHERE condition is applied.

```
182  proc print data=orion.sales;
183     where Country='AU';
184     where Salary<30000;
NOTE: WHERE clause has been replaced.
185  run;

NOTE: There were 134 observations read from the data set ORION.SALES.
      WHERE Salary<30000;
```

Exercise 2

Which WHERE statement correctly subsets the numeric values for May, June, or July and missing character names?

- a.
  ```
  where Month in (5-7)
          and Names=.;
  ```

- b.
  ```
  where Month in (5,6,7)
          and Names=' ';
  ```

- c.
  ```
  where Month in ('5','6','7')
          and Names='.';
  ```

Exercise 2

Which WHERE statement correctly subsets the numeric values for May, June, or July and missing character names?

- a.
```
where Month in (5-7)
        and Names=.;
```

- (b.)
```
where Month in (5,6,7)
        and Names=' ';
```

- c.
```
where Month in ('5','6','7')
        and Names='.';
```

Exercise 3

Open **L3_D5.sas**. Change WHERE SAME AND to WHERE ALSO. Submit the program and view the log.

What message is written to the log?

Exercise 3 solution

Open **L3_D5.sas**. Change WHERE SAME AND to WHERE ALSO. Submit the program and view the log.

What message is written to the log?

```
27   proc print data=orion.sales;
28      where Country='AU'  and Salary<30000;
29      where also Gender='F';
NOTE: WHERE clause has been augmented.
30      var First_Name Last_Name Gender Salary Country;
31   run;

NOTE: There were 23 observations read from the data set ORION.SALES.
      WHERE (Country='AU') and (Gender='F') and (Salary<30000);
```

WHERE ALSO results in the same message: WHERE clause has been augmented.

Exercise 4

Which WHERE statement returns all the observations that have a first name starting with the letter M for the given values?

a.
```
where Name like '_, M_';
```

b.
```
where Name like '%, M%';
```

c.
```
where Name like '_, M%';
```

d.
```
where Name like '%, M_';
```

Name
Elvish, Irenie
Ngan, Christina
Hotstone, Kimiko
Daymond, Lucian
Hofmeister, Fong
Denny, Satyakam
Clarkson, Sharryn
Kletschkus, Monica

last name, first name

Exercise 4 solution

Which WHERE statement returns all the observations that have a first name starting with the letter M for the given values?

a.
```
where Name like '_, M_';
```

b.
```
where Name like '%, M%';
```

c.
```
where Name like '_, M%';
```

d.
```
where Name like '%, M_';
```

Name
Elvish, Irenie
Ngan, Christina
Hotstone, Kimiko
Daymond, Lucian
Hofmeister, Fong
Denny, Satyakam
Clarkson, Sharryn
Kletschkus, Monica

last name, first name

Exercise 5

Which step sorts the observations in a SAS data set and overwrites the same data set?

a.
```
proc sort data=work.EmpsAU
          out=work.sorted;
   by First;
run;
```

b.
```
proc sort data=orion.EmpsAU
          out=EmpsAU;
   by First;
run;
```

c.
```
proc sort data=work.EmpsAU;
   by First;
run;
```

Exercise 5

Which step sorts the observations in a SAS data set and overwrites the same data set?

a.
```
proc sort data=work.EmpsAU
             out=work.sorted;
   by First;
run;
```

b.
```
proc sort data=orion.EmpsAU
             out=EmpsAU;
   by First;
run;
```

c.
```
proc sort data=work.EmpsAU;
   by First;
run;
```

Exercise 6

•Open and submit **L3_E6.sas**. View the log. Why did the program fail?

Exercise 6 solution

Open and submit **L3_E6.sas**. View the log. Why did the program fail?

The input data set was not sorted by Gender.

```
188   proc sort data=orion.sales
189            out=work.sorted;
190      by Country Gender;
191   run;

NOTE: There were 165 observations read from the data set ORION.SALES.
NOTE: The data set WORK.SORTED has 165 observations and 9 variables.

192
193   proc print data=work.sorted;
194      by Gender;
195   run;

ERROR: Data set WORK.SORTED is not sorted in ascending sequence. The current
       BY group has Gender = M and the next BY group has Gender = F.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: There were 64 observations read from the data set WORK.SORTED.
```

Exercise 7 – code run sequentially

PROC PRINT Code	Resultant Title(s)

`title1 'The First Line';`
`title2 'The Second Line';`
`proc print data=orion.sales;`
`run;`	

`title2 'The Next Line';`
`proc print data=orion.sales;`
`run;`	

`title 'The Top Line';`
`proc print data=orion.sales;`
`run;`	

`title3 'The Third Line';`
`proc print data=orion.sales;`
`run;`	

`title;`
`proc print data=orion.sales;`
`run;`	

Exercise 7 solution

PROC PRINT Code	Resultant Title(s)

`title1 'The First Line';`
`title2 'The Second Line';`
`proc print data=orion.sales;`
`run;`
	`The First Line`
	`The Second Line`

`title2 'The Next Line';`
`proc print data=orion.sales;`
`run;`
	`The First Line`
	`The Next Line`
	Replaces title2

`title 'The Top Line';`
`proc print data=orion.sales;`
`run;`
	`The Top Line`
	Cancels all and creates new title1

`title3 'The Third Line';`
`proc print data=orion.sales;`
`run;`
	`The Top Line`
	Creates new title3
	`The Third Line`

`title;`
`proc print data=orion.sales;`
`run;`
	Cancels all

Exercise 8

Which footnote or footnotes appear in the second procedure output?

- a.

Non Sales Employees

c.

Non Sales Employees
Confidential

- b.

Orion Star
Non Sales Employees

d.

Orion Star
Non Sales Employees
Confidential

```
footnote1 'Orion Star';
footnote2 'Sales Employees';
footnote3 'Confidential';
proc print data=orion.sales;
run;

footnote2 'Non Sales Employees';
proc print data=orion.nonsales;
run;
```

Exercise 8 solution

Which footnote or footnotes appear in the second procedure output?

- a.

Non Sales Employees

- c.

Non Sales Employees Confidential

- b. (circled)

Orion Star Non Sales Employees

- d.

Orion Star Non Sales Employees Confidential

```
footnote1 'Orion Star';
footnote2 'Sales Employees';
footnote3 'Confidential';
proc print data=orion.sales;
run;

footnote2 'Non Sales Employees';
proc print data=orion.nonsales;
run;
```

Replaces footnote2, cancels footnote3, leaves footnote1 unchanged