WorkShop 3A

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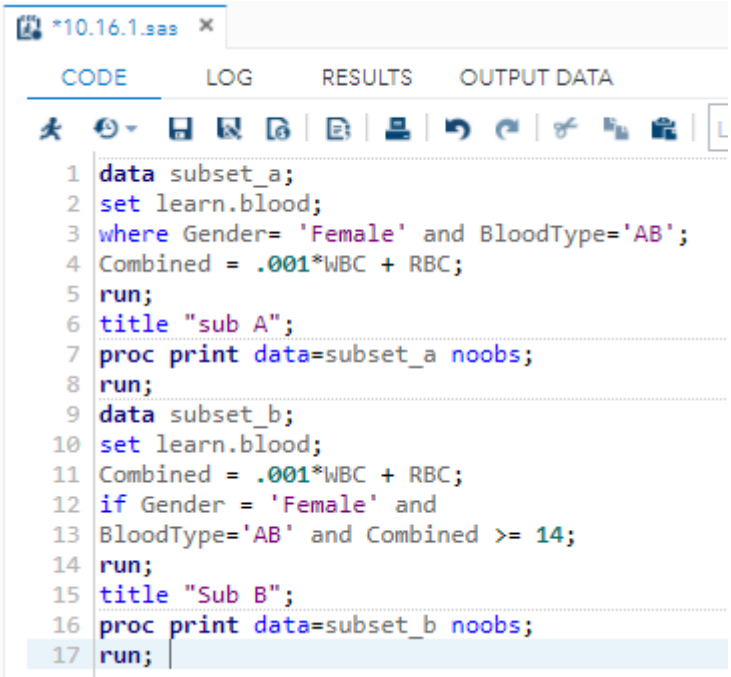
Section 10.16

Problem 1:

Code:



Result:

sub A

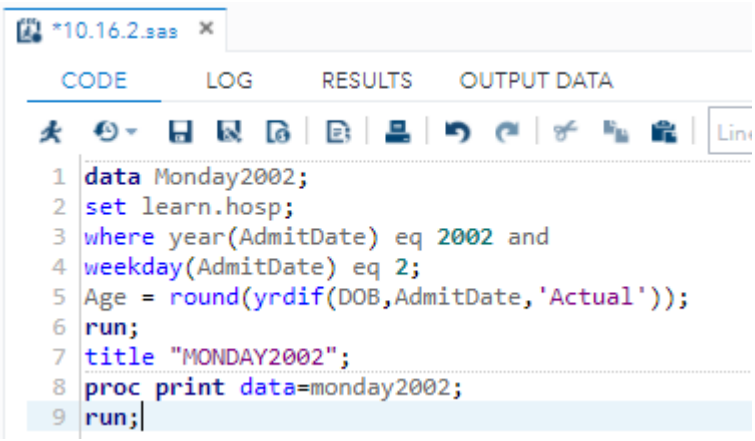
Gender	BloodType	AgeGroup	Subject	WBC	RBC	Chol	Combined
Female	AB	Young	1	7710	7.40	258	15.11
Female	AB	Old	25	7480	4.70	183	12.18
Female	AB	Young	78	7410	5.82	175	13.23
Female	AB	Young	79	.	4.61	69	.
Female	AB	Young	101	7610	4.60	162	12.21
Female	AB	Old	142	9380	5.82	218	15.20
Female	AB	Young	180	6220	5.58	.	11.80
Female	AB	Old	199	6810	5.54	.	12.35
Female	AB	Old	255	8080	5.45	144	13.53
Female	AB	Young	260	7680	.	127	.
Female	AB	Young	288	6810	8.26	138	15.07
Female	AB	Young	363	7950	5.24	.	13.19
Female	AB	Old	366	7350	4.72	135	12.07
Female	AB	Old	414	.	5.98	.	.
Female	AB	Old	449	7480	3.37	186	10.85
Female	AB	Young	459	6620	6.19	184	12.81
Female	AB	Old	528	6310	6.30	.	12.61
Female	AB	Old	544	6360	4.88	.	11.24
Female	AB	Old	652	9110	5.41	.	14.52
Female	AB	Old	802	7200	3.37	185	10.57

Sub B

Gender	BloodType	AgeGroup	Subject	WBC	RBC	Chol	Combined
Female	AB	Young	1	7710	7.40	258	15.11
Female	AB	Old	142	9380	5.82	218	15.20
Female	AB	Young	288	6810	8.26	138	15.07
Female	AB	Old	652	9110	5.41	.	14.52

Problem 2:

Code:



Result:

MONDAY2002

Obs	AdmitDate	quarter	DOB	DischrDate	Subject	Age
1	11/11/2002	3	10/01/1928	11/18/2002	48	74
2	11/11/2002	3	05/08/1940	11/19/2002	49	63
3	11/11/2002	3	09/26/1942	11/15/2002	50	60
4	07/22/2002	2	10/14/1986	07/25/2002	69	16
5	07/22/2002	2	09/05/1981	07/23/2002	70	21
6	10/14/2002	3	01/28/1961	10/20/2002	289	42
7	10/14/2002	3	04/25/1922	10/25/2002	290	80
8	10/14/2002	3	11/06/1948	10/29/2002	291	54
9	12/23/2002	3	09/07/1949	01/02/2003	303	53
10	12/23/2002	3	10/31/1927	12/26/2002	304	75
11	12/23/2002	3	01/29/1926	12/26/2002	305	77
12	10/07/2002	3	01/25/1936	10/16/2002	655	67
13	10/07/2002	3	08/08/1930	10/09/2002	656	72
14	10/07/2002	3	04/25/1973	10/16/2002	657	29
15	09/02/2002	2	03/20/1956	09/02/2002	795	46
16	09/02/2002	2	01/19/1933	09/02/2002	796	70
17	09/23/2002	2	11/01/1954	09/24/2002	881	48
18	09/23/2002	2	10/14/1981	10/02/2002	882	21
19	09/23/2002	2	10/04/1949	10/04/2002	1019	53
20	09/23/2002	2	06/18/1925	09/27/2002	1020	77
21	06/10/2002	1	08/27/1971	06/28/2002	1841	31
22	11/25/2002	3	08/23/1936	12/12/2002	1956	66
23	11/25/2002	3	05/18/1936	11/27/2002	1957	67
24	11/25/2002	3	09/11/1944	12/01/2002	1958	58
25	08/19/2002	2	05/02/1983	08/21/2002	2314	19
26	08/19/2002	2	10/17/1934	08/24/2002	2315	68
27	12/30/2002	3	01/17/1927	01/06/2003	2692	76
28	12/30/2002	3	11/04/1979	12/30/2002	2693	23
29	12/30/2002	3	08/24/1979	01/07/2003	2694	23
30	07/08/2002	2	01/10/1941	07/16/2002	3612	61
31	06/24/2002	1	11/24/1963	06/24/2002	3669	39
32	10/21/2002	3	07/04/1970	10/24/2002	3670	32
33	10/21/2002	3	02/13/1971	10/28/2002	3671	32
34	10/21/2002	3	10/11/1934	10/24/2002	3672	68
35	10/07/2002	3	09/07/1979	10/09/2002	3730	23
36	10/07/2002	3	01/03/1964	10/07/2002	3731	39
37	10/07/2002	3	07/10/1979	10/28/2002	3732	23
38	06/10/2002	1	08/09/1966	06/17/2002	3784	36
39	11/25/2002	3	07/22/1959	11/25/2002	4047	43
40	11/25/2002	3	03/05/1966	11/26/2002	4048	37
41	11/25/2002	3	04/07/1942	11/27/2002	4049	61
42	09/09/2002	2	05/22/1936	09/19/2002	4624	66
43	09/09/2002	2	06/15/1924	10/01/2002	4625	78
44	07/22/2002	2	12/21/1960	08/11/2002	4909	42
45	07/22/2002	2	05/01/1950	08/11/2002	4910	52
46	11/25/2002	3	01/03/1941	12/09/2002	5067	62
47	11/25/2002	3	03/03/1938	11/25/2002	5068	65
48	11/25/2002	3	10/31/1985	12/19/2002	5069	17
49	07/15/2002	2	12/19/1948	07/24/2002	5309	54
50	07/15/2002	2	10/27/1956	07/16/2002	5310	46
51	12/09/2002	3	10/26/1961	12/26/2002	5753	41
52	12/09/2002	3	04/19/1928	12/09/2002	5754	75
53	11/11/2002	3	12/08/1987	11/12/2002	6314	15
54	11/11/2002	3	08/12/1965	11/12/2002	6315	37
55	11/11/2002	3	11/11/1977	11/18/2002	6316	25
56	06/10/2002	1	04/20/1932	06/15/2002	6792	70
57	06/17/2002	1	11/29/1984	06/21/2002	6849	18
58	11/11/2002	3	07/14/1961	11/16/2002	7004	41
59	11/11/2002	3	04/27/1934	11/27/2002	7005	69
60	11/11/2002	3	09/13/1987	11/26/2002	7006	15
61	08/05/2002	2	08/08/1957	08/09/2002	7024	45
62	08/05/2002	2	12/22/1968	08/05/2002	7025	34
63	11/18/2002	3	03/17/1932	11/23/2002	7050	71
64	11/18/2002	3	04/16/1984	11/19/2002	7051	19
65	11/18/2002	3	01/17/1959	11/28/2002	7052	44
66	08/05/2002	2	01/02/1959	08/16/2002	7239	44

Problem 3:

Code:

*10.16.3.sas

CODE LOG RESULTS OUTPUT DATA

```
1  data LowMale LowFemale;
2  set learn.blood;
3  where Chol < 100 and Chol is not missing;
4  if gender = 'Male' then output LowMale;
5  else if gender = 'Female' then output LowFemale;
6  run;
7
8  title'low chol male';
9  proc print data=lowmale;
10 run;
11
12 title 'low chol female';
13 proc print data=lowfemale;
14 run;
```

Result:

low chol male

Obs	Gender	BloodType	AgeGroup	Subject	WBC	RBC	Chol
1	Male	AB	Old	47	5540	5.27	80
2	Male	A	Young	492	.	3.94	36
3	Male	A	Old	739	6460	4.99	90
4	Male	A	Old	829	7950	.	17
5	Male	O	Old	841	.	3.87	65
6	Male	O	Old	930	6550	6.07	96
7	Male	A	Young	970	6130	5.94	99
8	Male	O	Young	987	6020	.	94

low chol female

Obs	Gender	BloodType	AgeGroup	Subject	WBC	RBC	Chol
1	Female	AB	Young	79	.	4.61	69
2	Female	O	Old	133	8320	4.88	56
3	Female	A	Old	426	7220	6.81	97
4	Female	B	Old	776	5840	5.42	96

Problem 4:

Code:

*10.16.4.sas

CODE LOG RESULTS OUTPUT DATA

```
1  data Mountain_USA;
2  set learn.bicycles;
3  where Country = 'USA' and Model='Mountain Bike';
4  run;
5
6  data Road_France;
7  set learn.bicycles;
8  where Country='France' and Model='Road Bike';
9  run;
10
11 title 'mountain USA';
12 proc print data=MOUNTAIN_USA;
13 run;
14
15 title 'road FRANCE';
16 proc print data=road_france;
17 run;
```

Result:

mountain USA

Obs	Country	Model	Manuf	Units	UnitCost	Total Sales
1	USA	Mountain Bike	Trek	6000	$1,200	$7,200
2	USA	Mountain Bike	Cannondale	4000	$2,700	$10,800

road FRANCE

Obs	Country	Model	Manuf	Units	UnitCost	Total Sales
1	France	Road Bike	Trek	3400	$2,500	$8,500
2	France	Road Bike	Cannondale	900	$3,700	$3,330

Problem 5:

Code:

*10.16.5.sas

CODE LOG RESULTS OUTPUT DATA

```
1  proc print data=learn.inventory;
2  run;
3  proc print data=learn.newproducts;
4  run;
5  data updated;
6  set learn.inventory learn.newproducts;
7  run;
8  proc sort data=updated;
9  by Model;
10 run;
11 title "New Inventorhy";
12 proc print data=updated;
13 run;
```

Result:

Obs	Model	Price
1	M567	$23.50
2	S888	$12.99
3	L776	$159.98
4	X999	$29.95
5	M123	$4.59
6	S776	$1.99

Obs	Model	Price
1	L939	$10.99
2	M135	$0.75

New Inventorhy

Obs	Model	Price
1	L776	$159.98
2	L939	$10.99
3	M123	$4.59
4	M135	$0.75
5	M567	$23.50
6	S776	$1.99
7	S888	$12.99
8	X999	$29.95

Problem 6:

Code:

*10.16.6.sas

CODE LOG RESULTS OUTPUT DATA

```
1  proc sort data= learn.inventory out= learn.inventory;
2  by Model;
3  run;
4  proc sort data=learn.newproducts out=learn.newproducts;
5  by Model;
6  run;
7  data updated;
8  set learn.inventory learn.newproducts;
9  by Model;
10 run;
11 title "new new";
12 proc print data=updated;
13 run;
```

Result:

new new

Obs	Model	Price
1	L776	$159.98
2	L939	$10.99
3	M123	$4.59
4	M135	$0.75
5	M567	$23.50
6	S776	$1.99
7	S888	$12.99
8	X999	$29.95

Problem 7:

Code:

*10.16.7.sas

CODE LOG RESULTS OUTPUT DATA

```
1  proc means data=learn.gym noprint;
2  var Fee;
3  output out=Meanfee(drop=_type_ _freq_)
4  Mean= Average;
5  run;
6  data Percent;
7  set learn.gym;
8  if _n_ = 1 then set Meanfee;
9  CostPercent=round(100*Fee/Average);
10 drop Average;
11 run;
12 title "PERCENT";
13 proc print data=percent;
14 run;
```

Result:

PERCENT

Obs	Subj	Date	Fee	CostPercent
1	001	09/21/06	$383	97
2	002	07/15/05	$477	121
3	003	09/06/05	$412	104
4	004	04/02/06	$372	94
5	005	07/24/05	$438	111
6	006	03/26/06	$367	93
7	007	02/26/04	$398	101
8	008	11/12/05	$361	91
9	009	07/23/06	$436	110
10	010	04/14/05	$463	117
11	011	07/25/06	$405	103
12	012	08/15/06	$380	96
13	013	10/08/05	$452	114
14	014	02/19/04	$307	78
15	015	07/17/05	$368	93
16	016	01/21/05	$380	96
17	017	10/18/05	$388	98
18	018	06/18/04	$347	88
19	019	10/06/05	$483	122
20	020	04/26/04	$376	95
21	021	09/02/06	$436	110
22	022	04/02/05	$436	110
23	023	07/27/06	$436	110
24	024	08/21/04	$352	89
25	025	05/08/06	$394	100
26	026	09/02/06	$413	105
27	027	12/04/04	$385	98
28	028	01/16/05	$366	93
29	029	02/24/04	$420	106
30	030	04/05/06	$497	126
31	031	05/22/06	$408	103
32	032	03/31/06	$386	98
33	033	08/19/05	$451	114
34	034	09/20/06	$376	95
35	035	05/21/04	$359	91
36	036	06/24/06	$320	81
37	037	06/19/06	$417	106
38	038	04/21/05	$291	74
39	039	09/18/05	$422	107
40	040	02/14/05	$417	106
41	041	10/22/04	$401	102
42	042	03/11/06	$483	122
43	043	08/17/06	$387	98
44	044	03/15/04	$319	81
45	045	09/29/05	$421	107
46	046	09/01/05	$436	110
47	047	08/19/06	$402	102
48	048	09/14/04	$355	90
49	049	03/13/06	$385	98
50	050	04/29/05	$341	86
51	051	05/29/06	$399	101
52	052	08/24/06	$418	106
53	053	10/02/04	$424	107
54	054	10/25/05	$404	102
55	055	01/30/05	$383	97
56	056	10/29/04	$246	62
57	057	09/03/05	$366	93
58	058	03/30/04	$361	91
59	059	06/19/04	$470	119
60	060	02/22/05	$456	115
61	061	08/21/06	$455	115
62	062	09/21/06	$447	113
63	063	01/26/05	$359	91
64	064	03/15/06	$369	93
66	066	07/11/04	$463	117
67	067	06/11/05	$346	88
68	068	07/05/05	$417	106
69	069	05/22/06	$333	84
70	070	03/21/05	$352	89
71	071	11/18/04	$376	95
72	072	09/03/06	$421	107
73	073	01/23/06	$343	87
74	074	07/13/04	$332	84
75	075	08/19/05	$449	114
76	076	08/26/04	$461	117
77	077	07/16/04	$423	107
78	078	07/13/05	$399	101
79	079	02/25/06	$332	84
80	080	01/09/06	$354	90
81	081	09/14/05	$449	114
82	082	08/18/06	$443	112
83	083	03/10/04	$313	79
84	084	01/22/04	$459	116
85	085	12/13/04	$386	98
86	086	09/17/06	$353	89
87	087	01/22/05	$404	102
88	088	02/07/06	$295	75
89	089	01/25/04	$442	112
90	090	05/14/05	$446	113
91	091	02/08/04	$340	86
92	092	12/24/05	$453	115
93	093	04/08/04	$352	89
94	094	09/28/05	$398	101
95	095	04/10/06	$428	108
96	096	05/21/04	$357	90
97	097	01/23/06	$343	87
98	098	01/30/06	$402	102
99	099	09/10/06	$370	94
100	100	07/25/04	$381	96

Problem 8:

Code:

*10.16.8.sas

CODE LOG RESULTS OUTPUT DATA

```
1  data Markup;
2  input Manuf : $10. Markup;
3   datalines;
4   Cannondale 1.05
5   Trek 1.07
6   ;
7  proc sort data=markup;
8  by Manuf;
9  run;
10 proc sort data=learn.bicycles;
11 by Manuf;
12 run;
13 data Markup_Prices;
14 Merge work.markup learn.bicycles;
15 by manuf;
16 NewTotal=TotalSales*Markup;
17 format NewTotal dollar11.2;
18 run;
19 proc print data=markup_prices;
20 run;
```

Result:

Obs	Manuf	Markup	Country	Model	Units	UnitCost	Total Sales	NewTotal
1	Cannondale	1.05	USA	Road Bike	2000	$2,100	$4,200	$4,410.00
2	Cannondale	1.05	USA	Mountain Bike	4000	$2,700	$10,800	$11,340.00
3	Cannondale	1.05	France	Road Bike	900	$3,700	$3,330	$3,496.50
4	Cannondale	1.05	France	Mountain Bike	600	$1,899	$1,519	$1,595.16
5	Cannondale	1.05	United Kingdom	Road Bike	1200	$2,123	$2,548	$2,674.98
6	Cannondale	1.05	United Kingdom	Hybrid	500	$880	$440	$462.00
7	Trek	1.07	USA	Road Bike	5000	$2,200	$11,000	$11,770.00
8	Trek	1.07	USA	Mountain Bike	6000	$1,200	$7,200	$7,704.00
9	Trek	1.07	USA	Hybrid	4500	$650	$2,925	$3,129.75
10	Trek	1.07	France	Road Bike	3400	$2,500	$8,500	$9,095.00
11	Trek	1.07	France	Mountain Bike	5600	$1,300	$7,280	$7,789.60
12	Trek	1.07	France	Hybrid	1100	$540	$594	$635.58
13	Trek	1.07	United Kingdom	Road Bike	2444	$2,100	$5,132	$5,491.67
14	Trek	1.07	United Kingdom	Hybrid	800	$490	$392	$419.44
15	Trek	1.07	United Kingdom	Mountain Bike	1211	$1,121	$1,358	$1,452.56
16	Trek	1.07	Italy	Hybrid	700	$690	$483	$516.81
17	Trek	1.07	Italy	Road Bike	4500	$2,890	$13,005	$13,915.35
18	Trek	1.07	Italy	Mountain Bike	3400	$1,877	$6,382	$6,828.53

Problem 9:

Code:

*10.16.9.sas

CODE LOG RESULTS OUTPUT DATA

Line #

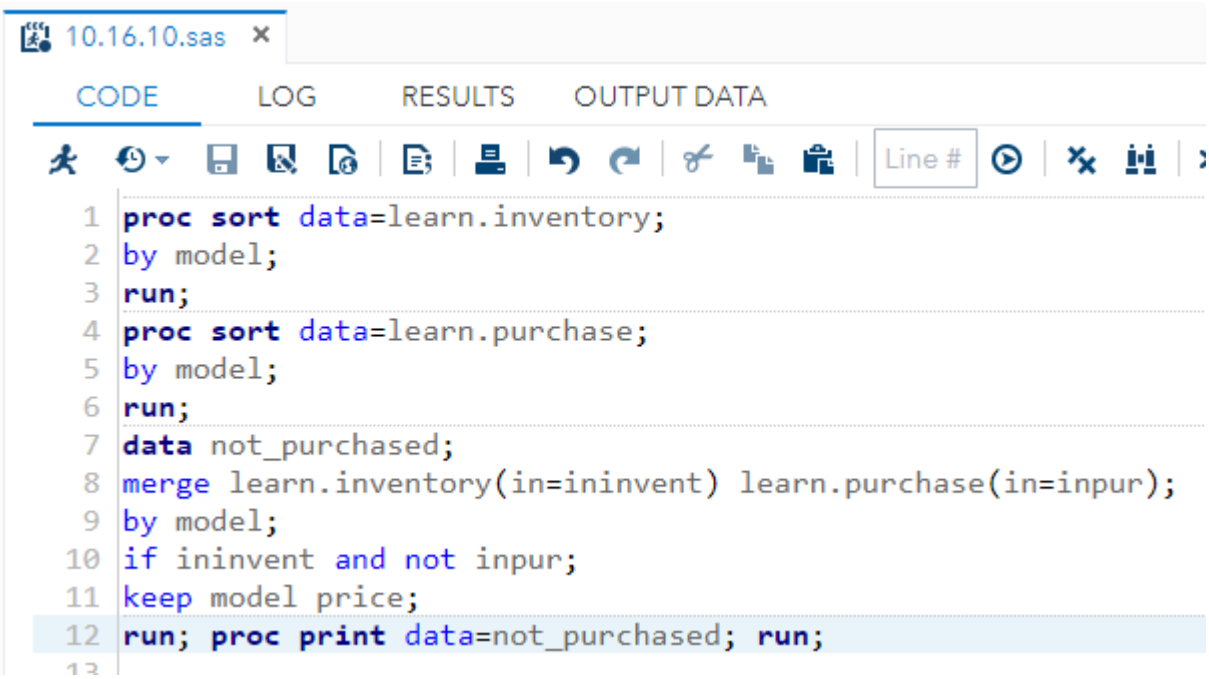
```
1  proc sort data=learn.purchase;
2  by model;
3  run;
4  proc sort data=learn.inventory;
5  by model;
6  run;
7  data pur_price;
8  merge learn.inventory learn.purchase(in=InPurchase);
9  by Model;
10 if InPurchase;
11 TotalCost = Quantity*Price;
12 format TotalCost dollar8.2;
13 run; proc print data=pur_price; run;
```

Result:

Obs	Model	Price	CustNumber	Quantity	TotalCost
1	L776	$159.98	101	1	$159.98
2	M123	$4.59	102	10	$45.90
3	M567	$23.50	103	1	$23.50
4	X999	$29.95	103	2	$59.90

Problem 10:

Code:

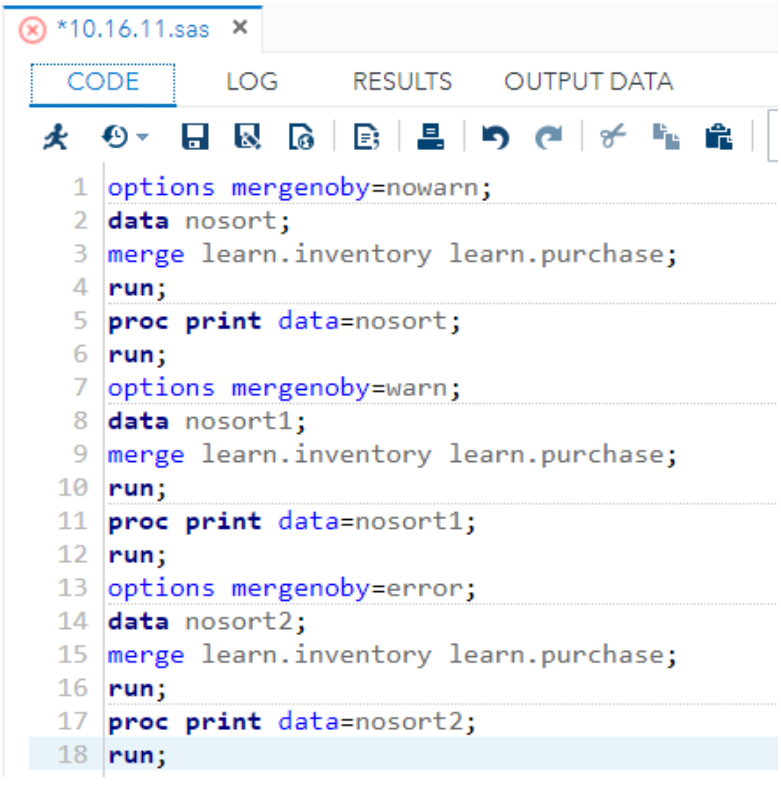


Result:

Obs	Model	Price
1	S776	$1.99
2	S888	$12.99

Problem 11:

Code:



Result:

SAS LOG for options mergenoby=nowarn:

```
NOTE: There were 6 observations read from the data set LEARN.INVENTORY.
NOTE: There were 4 observations read from the data set LEARN.PURCHASE.
NOTE: The data set WORK.NOSORT has 6 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time           0.02 seconds
      cpu time            0.01 seconds
```

SAS LOG for options mergenoby=warn:

```
WARNING: No BY statement was specified for a MERGE statement.
NOTE: There were 6 observations read from the data set LEARN.INVENTORY.
NOTE: There were 4 observations read from the data set LEARN.PURCHASE.
NOTE: The data set WORK.NOSORT1 has 6 observations and 4 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      cpu time            0.02 seconds
```

SAS LOG for options mergenoby=error:

```
ERROR: No BY statement was specified for a MERGE statement.
NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.NOSORT2 may be incomplete.  When this step was stopped there were 0 observations and 4 va
WARNING: Data set WORK.NOSORT2 was not replaced because this step was stopped.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      cpu time            0.00 seconds
```

Output:

Obs	Model	Price	CustNumber	Quantity
1	L776	$159.98	101	1
2	M123	$4.59	102	10
3	M567	$23.50	103	1
4	X999	$1.99	103	2
5	S888	$12.99	.	.
6	X999	$29.95	.	.

Obs	Model	Price	CustNumber	Quantity
1	L776	$159.98	101	1
2	M123	$4.59	102	10
3	M567	$23.50	103	1
4	X999	$1.99	103	2
5	S888	$12.99	.	.
6	X999	$29.95	.	.

Problem 12:

Code:

*10.16.12.sas

CODE LOG RESULTS OUTPUT DATA

```
1  proc sort data=learn.demographic_id out=demo;
2  by ID;
3  run;
4  proc sort data=learn.survey1 out=sur;
5  by Subj;
6  run;
7  data demosur;
8  merge demo sur(rename=(subj=ID));
9  by ID;
10 run;
11 proc print data=demosur;
12 run;
```

Result:

Obs	ID	DOB	Gender	Q1	Q2	Q3	Q4	Q5
1	001	10/10/1937	M	1	3	5	4	2
2	002	07/12/1987	F	5	5	4	4	3
3	003	.		2	1	2	1	1
4	004	01/05/2000	M	3	5	1	4	2
5	005	06/04/1966	F	3	3	3	3	3

Problem 13:

Code:

10.16.13.sas

CODE LOG RESULTS OUTPUT DATA

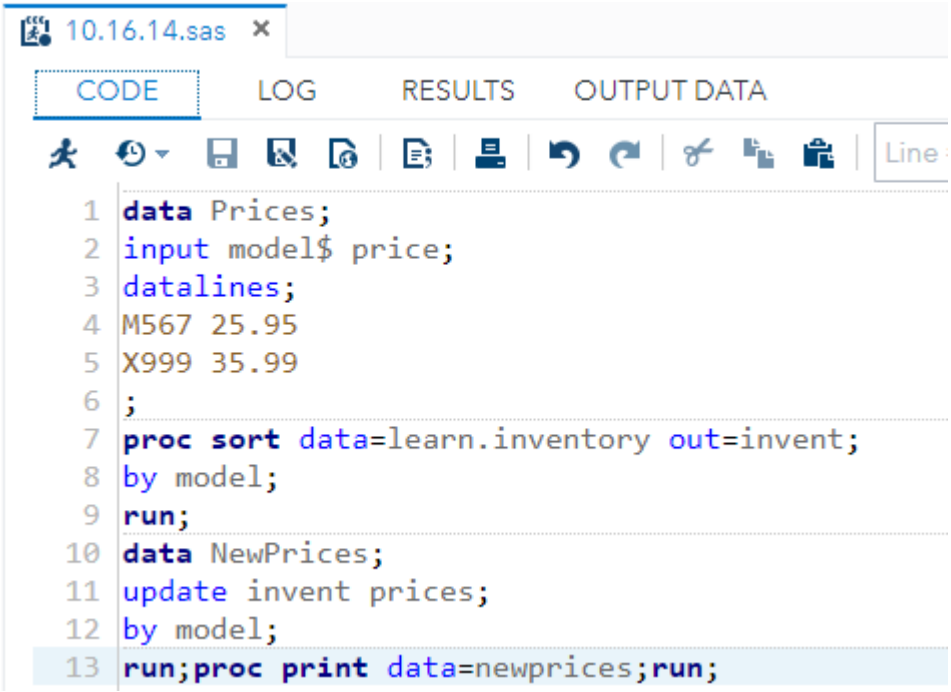
```
1  proc sort data=learn.demographic_id out=demo1;
2  by ID;
3  run;
4  data survey2;
5  set learn.survey2(rename=(ID=newid));
6  ID = put(newid,z3.);
7  drop newid;
8  run;
9  proc sort data=survey2 out=sur1;
10 by id;
11 run;
12 data merging;
13 merge demo1 sur1;
14 by ID;
15 run;proc print data=merging; run;
```

Result:

Obs	ID	DOB	Gender	Q1	Q2	Q3	Q4	Q5
1	001	10/10/1937	M	1	3	5	4	2
2	002	07/12/1987	F	5	5	4	4	3
3	003	.		2	1	2	1	1
4	004	01/05/2000	M	3	5	1	4	2
5	005	06/04/1966	F	5	4	5	4	5

Problem 14:

Code:



Result:

Obs	Model	Price
1	L776	$159.98
2	M123	$4.59
3	M567	$25.95
4	S776	$1.99
5	S888	$12.99
6	X999	$35.99