

WorkShop 1-B

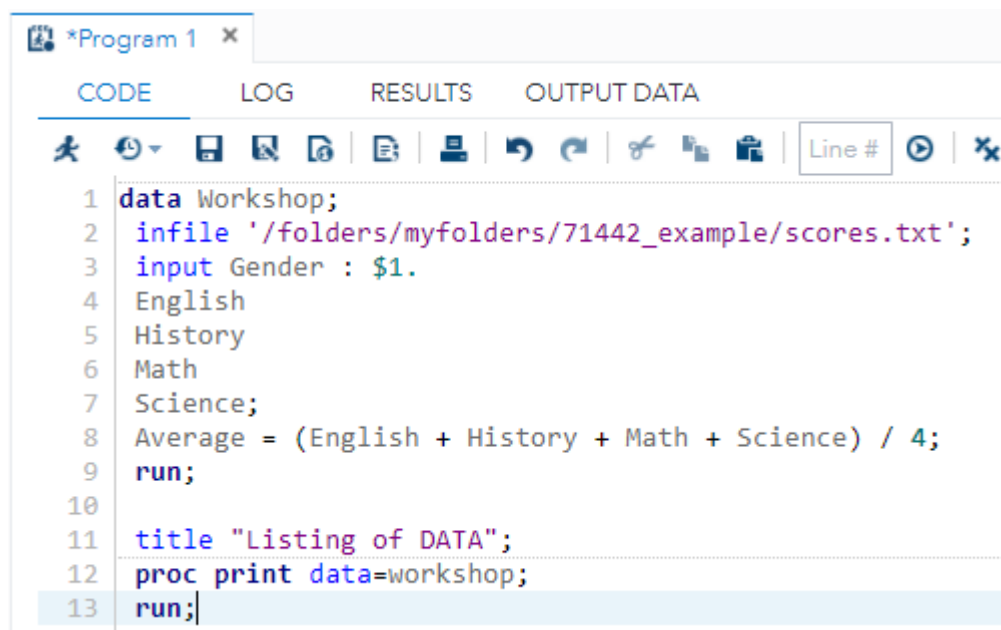
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Section 3.15:

Problem 1:

Program:



```
1 data Workshop;
2   infile '/folders/myfolders/71442_example/scores.txt';
3   input Gender : $1.
4   English
5   History
6   Math
7   Science;
8   Average = (English + History + Math + Science) / 4;
9   run;
10
11 title "Listing of DATA";
12 proc print data=workshop;
13 run;
```

Result:

Listing of DATA

Obs	Gender	English	History	Math	Science	Average
1	M	80	82	85	88	83.75
2	F	94	92	88	96	92.50
3	M	96	88	89	92	91.25
4	F	95	.	92	92	.

Problem 2:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 *a;
2 data vote;
3 infile '/folders/myfolders/71442_example/political.csv' dsd;
4 input state $
5   Party $
6   Age;
7 run;
8
9 *b;
10 Proc print data=work.vote;
11 run;
12
13 *c;
14 proc freq data=work.vote;
15 table Party;
16 run;
17
```

Result:

Obs	state	Party	Age
1	NJ	Ind	55
2	CO	Dem	45
3	NY	Rep	23
4	FL	Dem	66
5	NJ	Rep	34

The FREQ Procedure

Party	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Dem	2	40.00	2	40.00
Ind	1	20.00	3	60.00
Rep	2	40.00	5	100.00

Problem 3:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 data Company;
2 infile '/folders/myfolders/71442_example/company.txt' dsd dlm='$';
3 input LastName $
4 EmpNo $
5 Salary ;
6 * format Salary dollar10.;
7 run;
8
9 proc print data=work.company;
10 Title 'Company Dataset';
11 run;
```

Result:

Company Dataset

Obs	LastName	EmpNo	Salary
1	Roberts	M234	45000
2	Chien	M74777	.
3	Walters		75000
4	Rogers	F7272	78131

Problem 4:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 filename datafile '/folders/myfolders/71442_example/political.csv';
2 data Vote;
3 infile datafile dsd;
4 input state $ Party $ Age;
5 run;
6 title "Listing of Vote";
7
8 proc print data=Vote;
9 run;
10
11 proc freq data=Vote;
12 tables Party;
13 run;
```

Result:

Listing of Vote

Obs	state	Party	Age
1	NJ	Ind	55
2	CO	Dem	45
3	NY	Rep	23
4	FL	Dem	66
5	NJ	Rep	34

Listing of Vote

The FREQ Procedure

Party	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Dem	2	40.00	2	40.00
Ind	1	20.00	3	60.00
Rep	2	40.00	5	100.00

Problem 5:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
data mydata;
input X Y;
Z = 100 + 50*X+2*X**2-25*Y+Y**2;
datalines;
1 2
3 6
5 9
9 11
;
run;

Proc print data=mydata;
run;
```

Result:

Obs	X	Y	Z
1	1	2	106
2	3	6	154
3	5	9	256
4	9	11	558

Problem 6:

Program:

```
*Program 1 x
CODE LOG RESULTS
1 data bank;
2 infile '/folders/myfolders/71442_example/bankdata.txt';
3 input Name $ 1-15
4 Account $ 16-20
5 Balance 21-26
6 Rate 27-30;
7 Interest=balance*rate;
8 run;
9
10 proc print data=bank noobs;
11 run;
12
```

Result:

Name	Account	Balance	Rate	Interest
Philip Jones	V1234	432	2.32	1002.24
Nathan Philips	V1399	1520	2.45	3724.00
Shu Lu	W8892	45123	3.45	155674.35
Betty Boop	V7677	5000	2.78	13900.00

Problem 7:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 data Geography;
2 infile '/folders/myfolders/71442_example/geocaching.txt';
3 input GeoName $ 1-20
4 LongDeg 21-22
5 LongMin 23-28
6 LatDeg 29-30
7 LatMin 31-36;
8 run;
9 title "Geography";
10 proc print data=Geography noobs;
11 run;
12
```

Result:

Geography

GeoName	LongDeg	LongMin	LatDeg	LatMin
Higgensville Hike	40	30.293	74	46.539
Really Roaring	40	27.404	74	42.147
Cushetunk Climb	40	37.024	74	48.014
Uplands Trek	40	30.990	74	52.794

Problem 8:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 data bank;
2 infile '/folders/myfolders/71442_example/bankdata.txt';
3 input @1 Name $15.
4   @16 Account $5.
5   @21 Balance 6.
6   @27 Rate 4.;
7 Interest = Balance * Rate;
8 run;
9 title "Listing of Data Set Bank";
10 proc print data=bank;
11 format
12   Balance dollar11.
13   Interest dollar11.2;
14 run;
```

Result:

Listing of Data Set Bank

Obs	Name	Account	Balance	Rate	Interest
1	Philip Jones	V1234	\$432	2.32	\$1,002.24
2	Nathan Philips	V1399	\$1,520	2.45	\$3,724.00
3	Shu Lu	W8892	\$45,123	3.45	\$155,674.35
4	Betty Boop	V7677	\$5,000	2.78	\$13,900.00

Problem 9:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 data New;
2 infile "/folders/myfolders/71442_example/geocaching.txt";
3 input @1 Cachename $20.
4 @21 Longdeg 2.
5 @23 Longmin 6.
6 @29 Latdeg 2.
7 @31 Latmin 6.;
8 run;
9
10 title 'Listing';
11 proc print data=New noobs;
12 run;
```

Result:

Listing

Cachename	Longdeg	Longmin	Latdeg	Latmin
Higgensville Hike	40	30.293	74	46.539
Really Roaring	40	27.404	74	42.147
Cushetunk Climb	40	37.024	74	48.014
Uplands Trek	40	30.990	74	52.794

Problem 10:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 data Stocks;
2 infile '/folders/myfolders/71442_example/stockprices.txt';
3 input
4
5 @1 Stock $4.
6 @5 PurDate mmddyy10.
7 @15 PurPrice dollar6.
8 @21 Number 4.
9 @25 SellDate mmddyy10.
10 @35 SellPrice dollar6.
11 ;
12
13 TotalPur = Number*PurPrice;
14 TotalSell = Number*SellPrice;
15 Profit = TotalSell-TotalPur;
16 format PurPrice SellPrice TotalPur TotalSell Profit dollar10.
17 PurDate SellDate mmddyy10.;
18 run;
19
20 title "StockPrice";
21 proc print data = Stocks;
22 run;
```

Result:

StockPrice

Obs	Stock	PurDate	PurPrice	Number	SellDate	SellPrice	TotalPur	TotalSell	Profit
1	IBM	05/21/2006	\$80	100	07/20/2006	\$89	\$8,000	\$8,850	\$850
2	CSCO	04/05/2005	\$18	200	09/21/2005	\$24	\$3,500	\$4,720	\$1,220
3	MOT	03/01/2004	\$15	500	10/10/2006	\$20	\$7,350	\$9,950	\$2,600
4	XMSR	04/15/2006	\$28	200	04/15/2006	\$13	\$5,680	\$2,540	\$-3,140
5	BBY	02/15/2005	\$45	100	09/09/2006	\$57	\$4,520	\$5,680	\$1,160

Problem 11:

Program:

```
*Program 1 x
CODE LOG RESULTS OUTPUT DATA
1 data Myemployee;
2 infile '/folders/myfolders/71442_example/employee.csv' dsd;
3 informat ID $3.
4 Name $20.
5 Depart $8.
6 DateHire mmddyy10.
7 Salary dollar8.;
8 input ID Name Depart DateHire Salary;
9 format DateHire date9.;
10 run;
11 title "Listing of EMPLOY";
12 proc print data=Myemployee;
13 run;
```

Result:

Listing of EMPLOY

Obs	ID	Name	Depart	DateHire	Salary
1	123	Harold Wilson	Acct	15JAN1989	78123
2	128	Julia Child	Food	29AUG1988	89123
3	007	James Bond	Security	01FEB2000	82100
4	828	Roger Doger	Acct	15AUG1999	39100
5	900	Earl Davenport	Food	09SEP1989	45399
6	906	James Swindler	Acct	21DEC1978	78200