Workshop Assignment 1: Group

Question1.

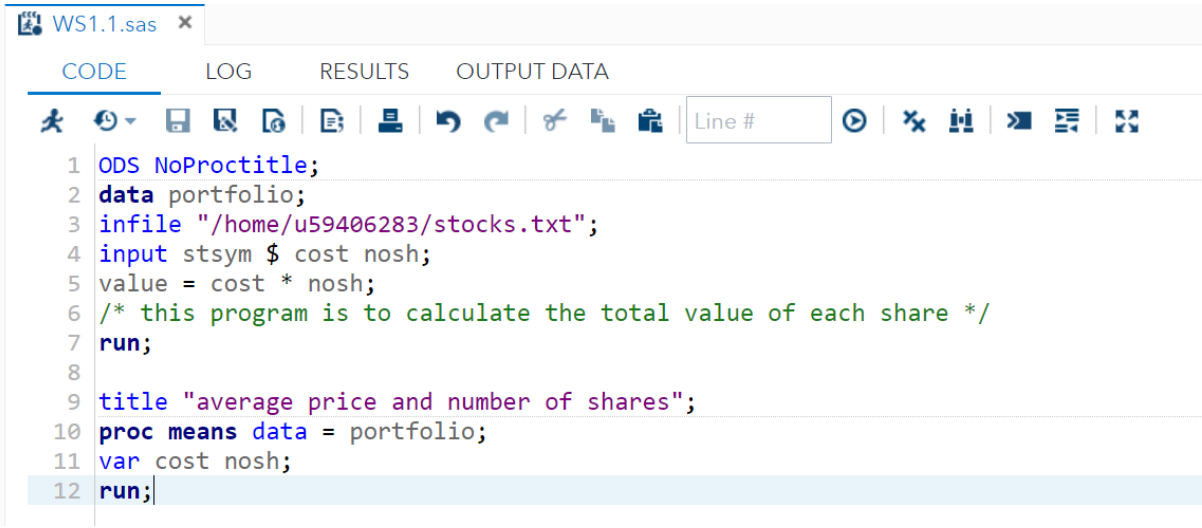
You have a text file called **`Stocks.txt`** containing a stock symbol, a price, and the number of shares. Here are some sample lines of data:

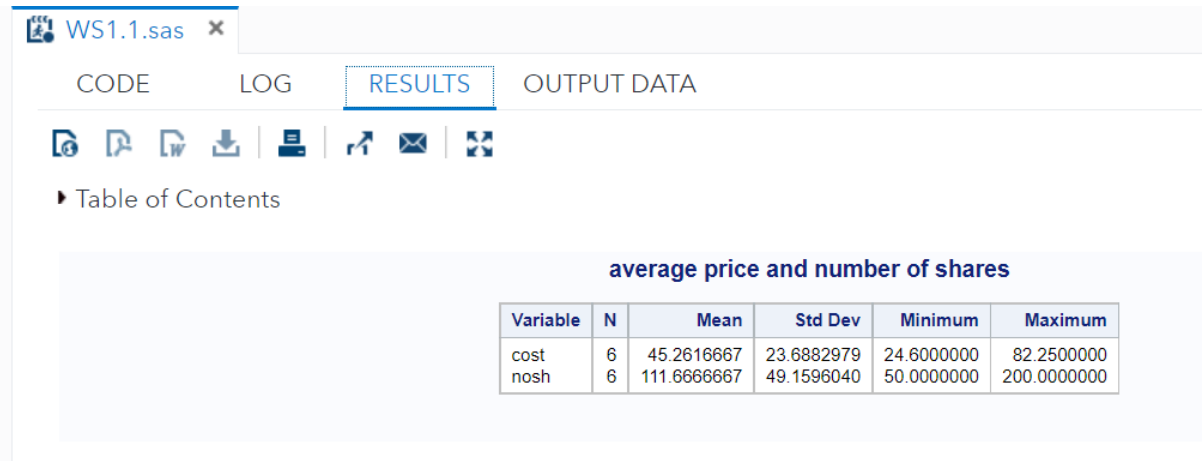
```
AMGN 67.66 100
DELL 24.60 200
GE 34.50 100
HPQ 32.32 120
IBM 82.25 50
MOT 30.24 100
```

a. Using this raw data file, create a temporary SAS data set (Portfolio). Choose your own variable names for the stock symbol, price, and number of shares. In addition, create a new variable (call it Value) equal to the stock price times the number of shares. Include a comment in your program describing the purpose of the program, your name, and the date the program was written.

b. Write the appropriate statements to compute the average price and the average number of shares of your stocks.

Answer:





Question 2.

Given the program here, add the necessary statements to compute four new variables:

a. Weight in kilograms (1 kg = 2.2 pounds). Name this variable WtKg.

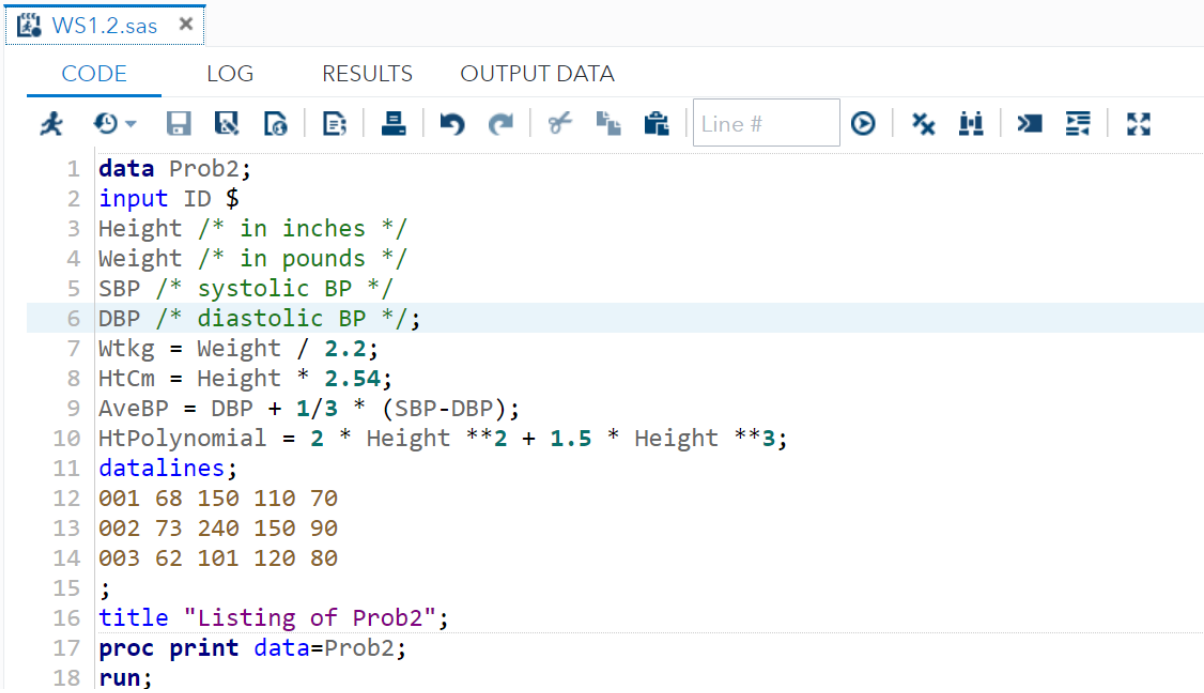
c. Height in centimeters (1 inch = 2.54 cm). Name this variable HtCm.

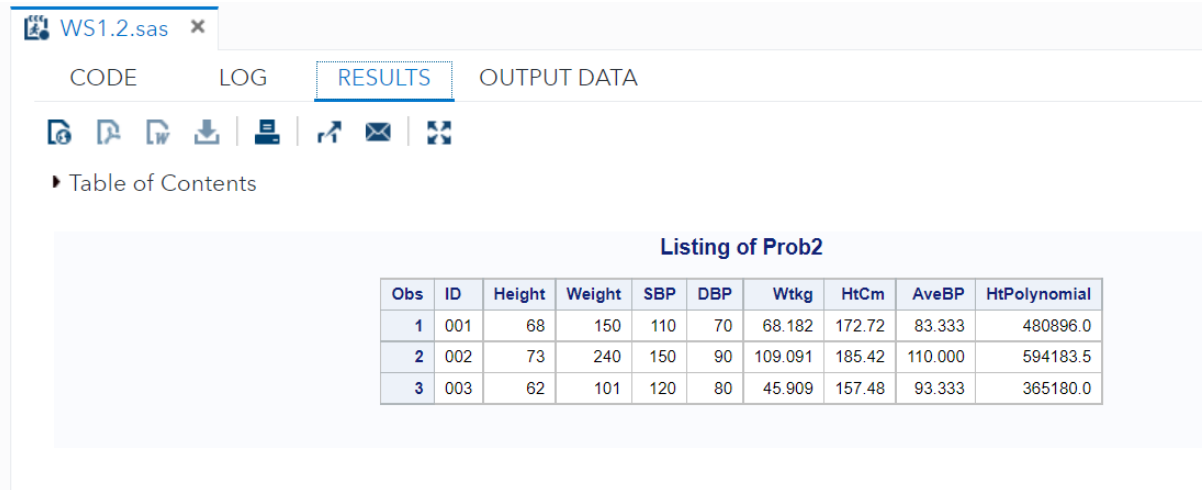
d. Average blood pressure (call it AveBP) equal to the diastolic blood pressure plus one-third the

difference of the systolic blood pressure minus the diastolic blood pressure.
e. A variable (call it HtPolynomial) equal to 2 times the height squared plus 1.5 times the height cubed.
Here is the program for you to modify:

```
data Prob2;
input ID $
Height /* in inches */
Weight /* in pounds */
SBP /* systolic BP */
DBP /* diastolic BP */;
< place your statements here >
datalines;
001 68 150 110 70
002 73 240 150 90
003 62 101 120 80
;
title "Listing of Prob2";
proc print data=Prob2;
run;
```

Answer:





Listing of Prob2

Obs	ID	Height	Weight	SBP	DBP	Wtkg	HtCm	AveBP	HtPolynomial
1	001	68	150	110	70	68.182	172.72	83.333	480896.0
2	002	73	240	150	90	109.091	185.42	110.000	594183.5
3	003	62	101	120	80	45.909	157.48	93.333	365180.0

Question 3.

You are given an equation to predict electromagnetic field (EMF) strength, as follows:

$EMF = 1.45 \times V + (R/E) \times V^3 - 125.$

If your SAS data set contains variables called *V*, *R*, and *E*, write a SAS assignment statement to compute the EMF strength.

Answer:

WS1.3.sas

CODE LOG RESULTS OUTPUT DATA

```
1  data Electro;
2  input V R E;
3  EMF = (1.45*V) + ((R/E) * V**3) -125;
4  datalines;
5  2 4 6
6  1 2 3
7  4 6 8
8  ;
9  run;
10 proc print data=Electro;
11 run;
```

WS1.3.sas

CODE LOG RESULTS OUTPUT DATA

Table of Contents

Obs	V	R	E	EMF
1	2	4	6	-116.767
2	1	2	3	-122.883
3	4	6	8	-71.200

Question 4.

What is wrong with this program?

```
001 data New-Data;
002 infile C:\books\learning\Prob4data.txt;
003 input x1 x2
004 y1 = 3(x1) + 2(x2);
005 y2 = x1 / x2;
006 New_Variable_from_X1_and_X2 = X1 + X2 - 37;
007 run;
```

Note: Line numbers are for reference only; they are not part of the program.

Answer:

*WS1.4.sas

CODE LOG RESULTS OUTPUT DATA

```
1  data NewData;
2  infile "/home/u59406283/Prob4data.txt";
3  input x1 x2;
4  y1 = 3*x1 + 2*x2;
5  y2 = x1/x2;
6  newvariablefromxoneandxtwo= x1 + x2 -37;
7  run;
8  proc print data=newdata;
9  run;
10
11
```

*WS1.4.sas

CODE LOG RESULTS OUTPUT DATA

Table of Contents

Obs	x1	x2	y1	y2	newvariablefromxoneandxtwo
1	2	4	14	0.5	-31
2	3	6	21	0.5	-28

```
001 data New-Data;                                  // remove hyphen
002 infile C:\books\learning\Prob4data.txt;         // insert double quotes
003 input x1 x2                                     // put semi-colon
004 y1 = 3(x1) + 2(x2);                             // remove braces and put multiplication
005 y2 = x1 / x2;
006 New_Variable_from_X1_and_X2 = X1 + X2 - 37;     //remove hyphens and numbers
007 run;
```

Question 5.

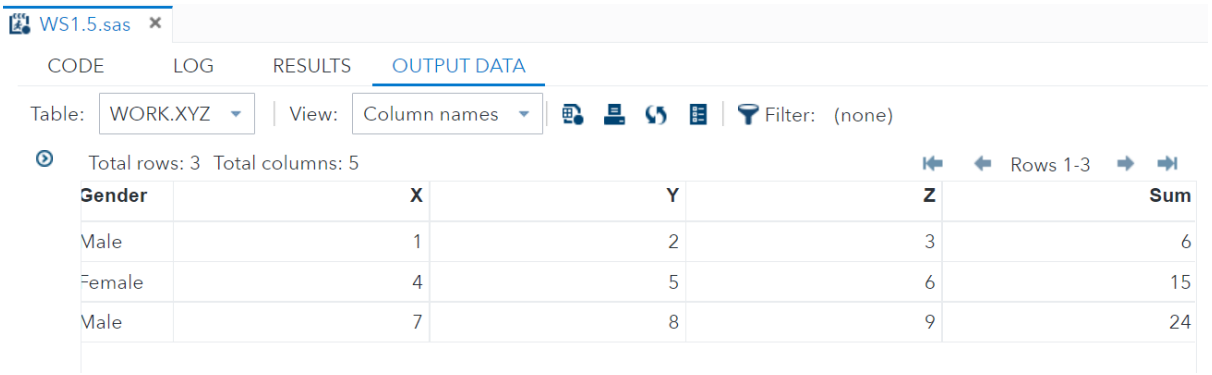
What is wrong with this program?

```
001 data XYZ;
002 infile "C:\books\learning\DataXYZ.txt";
003 input Gender X Y Z;
004 Sum = X + y + Z;
005 run;
```

The File **`C:\books\learning\DataXYZ.txt`** looks as follows:

```
Male 1 2 3
Female 4 5 6
Male 7 8 9
```

Answer:



Gender	X	Y	Z	Sum
Male	1	2	3	6
Female	4	5	6	15
Male	7	8	9	24

```
001 data XYZ;
002 infile "C:\books\learning\DataXYZ.txt";
003 input Gender X Y Z;                    //gender is a character add $
004 Sum = X + y + Z;
005 run;
```

Add the following information in every workshop submission:

Sr.No	Name	Contribution
1	Sukanya Mukherjee	Question 1
2	Kanishk Kumar	Question 2
3	Nishant Kotak	Question 3
4	Prachi Sahai	Question 4
5	Shravan Shroff	Question 5