SAS PROJECT

Task 1

➔Here is what you have...

➔You have data of students (in Excel sheets) from two different classes (STAT for Statistics and HIST for History) containing their weights data. There is a separate dataset called STUHT (Student Height) containing heights data of all those students from the two classes STAT.

(the data is in a zip file. First download to a folder on your computer, then extract it by right-clicking and choosing "extract". Then follow the steps to import into SAS as discussed below)

➔After you have downloaded and installed the SAS University Edition on your computer, your tasks are as follows:

1. Import the data from Excel sheets into SAS (using SAS import wizard or Proc Import)

2. Stack data from STAT and HIST (you can use either the data step or Proc

Append)

3. Merge with the STUDHT dataset (you can use either the data step or Proc SQL)

4. Convert the weight and height into Metric system units using the following formulae:

a. Weight (in US-pounds (lbs)) multiplied by 0.454 is Weight (in Kilograms (kgs))

b. Height (in inches) multiplied by 2.54/100 is Height in Meters

5. Create a variable called BMI from their weight and heights using the formula:

BMI = weight in kilograms / square of the height in meters

6. Apply conditional logic to create a 'STATUS' variable assigning if the students are Underweight, Healthy, Overweight or Obese based on the following criteria:

a. Underweight, if BMI is less than 18

b. Healthy, if BMI is great than or equal to 18 and less than 20

c. Overweight, if BMI is great than or equal to 20 and less than 22

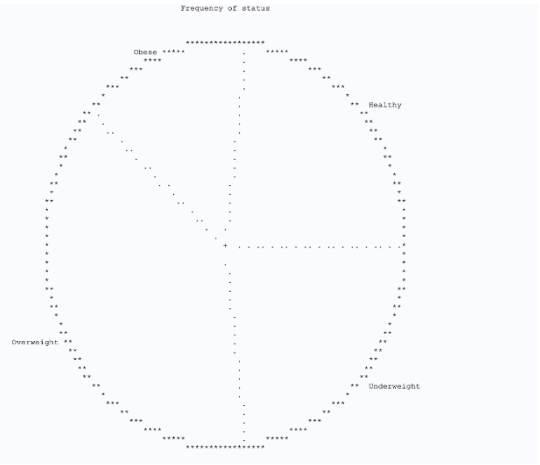
d. Obese, if BMI is great than or equal to 22

7. Final step is to generate the pie chart on the variable STATUS. The output should look like this.

➔DELIVERABLE

Analyze the data from a pie chart and shows the percentage of students in each of the categories of Underweight, Healthy, Overweight and Obese

Please attach your SAS code for review in your message after you finish your assignment.



➔**Questions for this assignment**

1. What is the percentage of students who are Underweight, Healthy, Overweight and Obese?

Task 2

➔Using the Students Health data (HIST, STAT, STUDHT datasets), you will have to do the following:

1. Create a frequency distribution table of the gender and status variables, and save the output in a dataset.

2. Concatenate the count and percentage variables to obtain final reportable values. The values should be formatted precisely in this format, where xx is the count and yy.yy is the percentage ----> xx (yy.yy%)

3. Transpose the dataset in such a way that the STATUS variable is transposed across the table.

4. Create a final report with the title "Report of Frequency Table" and the summary statistics obtained by above. The final report should look like this.

Obs	gender	Healthy	Overweight	Underweight	Obese
1	F	xx(xx.xx%)	xx(xx.xx%)	xx(xx.xx%)	xx(xx.xx%)
2	M	xx(xx.xx%)	xx(xx.xx%)	xx(xx.xx%)	xx(xx.xx%)

➔**Questions for this assignment**

1. What percentage of male students are Healthy?

2. How many female students are Obese?

Task 3

➔For the students' health data (HIST, STAT, STUDHT), create a SAS macro that generates frequency distribution table.

1. Follow the steps as in Project #2 to create the frequency distribution table.

2. Encapsulate the entire code in a macro called myStat with input parameters varl and var2

3. Call myStat with the relevant input parameters to create the frequency distribution table as shown below.

Report of Frequency table

Obs	status	F	M
1	Healthy	xx(xx.xx%)	xx(xx.xx%)
2	Obese	xx(xx.xx%)	xx(xx.xx%)
3	Overweight	xx(xx.xx%)	xx(xx.xx%)
4	Underweight	xx(xx.xx%)	xx(xx.xx%)

➔Questions for this assignment

1. Submit the macro code that generates the frequency distribution table.

➔For the students' health data (HIST, STAT, STUDHT), create a SAS macro that generates frequency distribution table.

1. Follow the steps as in Project #2 to create the frequency distribution table.

2.Encapsulate the entire code in a macro called myStat with input parameters vart and var2 Call myStat with the relevant input parameters to create the frequency distribution table as shown below.

Report of Frequency table

Obs	status	F	M
1	Healthy	xx(xx.xx%)	xx(xx.xx%)
2	Obese	xx(xx.xx%)	xx(xx.xx%)
3	Overweight	xx(xx.xx%)	xx(xx.xx%)
4	Underweight	xx(xx.xx%)	xx(xx.xx%)

➔Questions for this assignment

1. Submit the macro code that generates the frequency distribution table.