**Description**

In this lab you will be learning to use SPSS to construct confidence intervals for one quantitative variable. When answering a follow up question please use a font color other than black, red, yellow or white to help me differentiate between the question and your answer. When you have completed the lab use the Blackboard assignment submission link to submit your assignment in a Microsoft Word or PDF formatted document.

**Data**

The data we will be using comes from the responses of the STA 215 Demographic Survey 2020. You will need to download and save the Excel file “STA 215 Demographic Survey 2020” from Blackboard.

**Lab Activities**

**Variable View Set-up** - You will insert a screen shot of the Variable View set-up below to show completion of this task.

**Descriptive Statistics** – You will generate the descriptive statistics along with the 95% confidence interval for the variable age. Insert the output below. (Analyze >> Descriptive Statistics >> Explore…)

**Boxplot** – Create a boxplot for the variable age. You will need to change the orientation to horizontal, change the case numbers to the value of the outliers, and change the color of the boxplot. Insert the boxplot below. (Graphs >> Chart Builder)

**Histogram** – Create a histogram for the variable age. You will need to change the color to match the color of your boxplot and add gridlines to the histogram. Insert the completed histogram below. (Graphs >> Chart Builder)

1. What is the sample size for the variable age? \_\_\_\_\_\_\_\_\_\_\_
2. Is the boxplot left skewed, right skewed, or symmetric? \_\_\_\_\_\_\_\_\_\_
3. How many outliers are there for the variable age. \_\_\_\_\_\_\_\_\_\_
4. Is the histogram unimodal, bimodal, or multimodal? \_\_\_\_\_\_\_\_\_\_\_\_
5. Interpret the confidence interval from the output for the variable age.
6. Use SPSS to construct a 90% confidence interval for the variable height. Insert the output below.
7. Interpret the confidence interval for the variable height in question 6.
8. What is the mean for the variable height? \_\_\_\_\_\_\_\_\_\_
9. What is the median for the variable height? \_\_\_\_\_\_\_\_\_\_\_
10. Is the distribution for the variable height left skewed, right skewed, or symmetric? \_\_\_\_\_\_\_\_\_\_
11. When analyzing the variables age of students and height of students are there other variable we should consider in the analysis?