COMPUTER PROJECT

MAS291

In this project, you are required to work in a group and present your work to the class.

Each group will look for **secondary data** (about housing, finance, health,... or any topic of your choice), then use **Excel** to perform inferential statistics on the data to obtain useful information.

More specifically, you are required to apply all of the following techniques on your data:

1. Determine expected value, the variance, standard deviation.
2. Display histogram(s), boxplot(s) and show all the outliers in the data.
3. Test a hypothesis and construct a confidence interval for the mean of a population.
4. Test a hypothesis and construct a confidence interval for the proportion of a population.
5. Test a hypothesis and construct a confidence interval for the difference in means of two populations.
6. Test a hypothesis and construct a confidence interval for the difference in proportions of two populations.
7. Regression analysis. In this requirement, you are expected to complete the following steps:
   (a) Identify two random variables X and Y in your data.
   $\rightarrow$ For instance, X = height, Y = weight.
   (b) Construct a scatter plot for the data. Do you observe a linear relationship?
   (c) Compute the sample correlation coefficient.
   (d) Find the equation of the estimated regression line, and use it to predict a future value for Y.
   (e) Test the significance of regression.