*Lab Assignment is due in soft copy on **16th August (by 5 pm)**. The Assignment must be entirely typed and converted to PDF. Make sure to include a cover page containing your information. The assignment must be emailed (no hard copy necessary). Late assignments will be penalized by 10 points (no exceptions).*

Total: 30 points

Q1. Simple Linear Regression

Open the file SLR.dta in Stata.

The file contains data on household income ($) and expenditure ($) for 20 households. Answer the following question using the data file.

a. Discuss the descriptive statistics of the two variables.
b. Generate a linear regression line to represent the relationship between the variables. Explain the coefficients of your regression model.
Hint: command is "reg dependent variable independent variable"
c. Explain the statistical significance of the coefficients.
d. Generate a graph of your regression model against a scatter plot.
e. How well does the regression equation fit the data? Discuss.

Q2. Multiple Regression

Open the file MR.dta

The file contains data on quantity demanded of Product A (*demand*), price ($) of Product A (*price*) and price ($) of the substitute commodity, Product B (*psub*).

Generate the multiple regression model for these variables and answer the following questions.

a. Explain the meaning of the regression coefficients.
b. Explain the statistical significance of the coefficients.
c. What are the values of coefficient of determination and adjusted coefficient of determination? Discuss what these values mean.
d. What is the predicted quantity demanded for Product A if price of Product A is $35 and demand for rival product is $30?
e. Determine the 95% confidence interval for both variables and interpret the meaning of these intervals.