ECO240 R Homework 2
[Due Date: May 28th (Tuesday) 2019 at 12:30]

- Submit a hard copy to my office before the due. **No late homework will be accepted.**
- Submit "*Contribution Paper*" and "*Honor Code*" forms *signed* by all the group members.
- Your group can be up to 4 students.
- Any copied/being copied HW will get ZERO point. No negotiation. If suspected, I reserve the right to invite you for the further investigation. Please read "Honor Code" document carefully to understand what COPY means.
- You must us R program to complete the required tasks.

Task1: 2 Population Hypothesis Testing
Task2: Two Variable Regression Analysis

Task 1: Hypothesis Testing

(May) Refer to: https://rstudio-pubs-static.s3.amazonaws.com/23230_b2e9b87251a2488da0fba51325e26040.html

Find a data set which can be used meaningfully to conduct Two Population Hypothesis Testing.

(a) Explain your variables and the objective of your tests.

(b) Explain which case (dependent sample, independent sample (case 1, 2 or 3) you are using and why.

(c) Set up a hypothesis and conduct two-population hypothesis testing. Interpret your finding. Was your objective of the hypothesis test is met? Was your research question answered?

(d) Calculate p value.

(e) Calculate type II error. (Decide a meaningful value for the mean of alternative hypothesis).

Task 2: Regression Analysis

Refer to: http://htmlpreview.github.io/?https://github.com/andrewpbray/oiLabs-base-R/blob/master/simple_regression/simple_regression.html

Find a data set which can be used to run a regression analysis to answer your research question.

(a) State your research question/objective.

(b) Describe the variables to be included in a model. Dependent/Independent Variables.

(c) Conduct necessary data summaries (numerical/graphical) [scatter plots are "must"]

(d) Run a regression analysis. Include as many independent variable as needed.

(e) Interpret the results in terms of overall model fit as well as the meaning of each estimated coefficient.

(f) Fit the regression line to the scatter plots from part (c).