Lab Assignment #1

Read the following carefully!!!

(1) Save your work using the lab number, last name initial, and first name. e.g. **Lab1-Lheejeong**

(2) Save it as a single **PDF** file and upload it to the Titanium. **Points will be deducted if the uploaded file is not a PDF file. Note:** 20% of the total points will be deducted.

(3) Make sure to **label each problem**.

(4) For each problem, **copy/paste your RStudio codes and results** inside a **text box**.

Example:

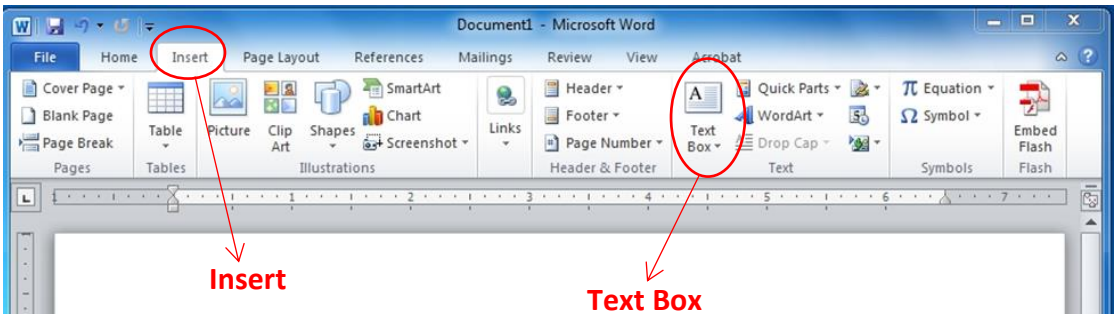
```
> summary(GPA)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   2.80    3.20    3.50    3.36    3.60    3.70
```

Make sure to **resize a text box** so that the results are displayed neatly.

Example:

```
> summary(GPA)
   Min. 1st Qu.  Median
Mean 3rd Qu.    Max.
   2.80    3.20    3.50
3.36    3.60    3.70
```

→ Points will be deducted!!



(5) A **text box Is used for the results from RStudio**. Other answers MUST be typed OUTSIDE the text box. **Note:** 50% of the points will be deducted.

(6) Restart the compute before you leave.

See next page for the lab assignment.

Do the following.

1. Calculate $2.4 - 1.96 * \frac{0.71}{\sqrt{82}}$, using Rstudio as a calculator. **Copy/Paste** the code/result

2. Import a data file called "**student**" It has 10 variables (see Titanium).

(a) Save the file (see titanium) in your computer.
(b) **Import** the data file into RStudio.
(c) Type `attach(student)` to attach the data.
(d) Type `head(student)` in the command window. **Copy/Paste** the code and result.

3. Create a **frequency table (1 variable)**

(a) Create a table for the variable `GENDER` by typing `table(GENDER)`
(b) Create a table for the variable `MARRIED` by typing `table(MARRIED)`
(c) How many female and male students are there?
(d) How many students are married?
(e) How many students have tattoos?

4. Create a **contingency table (2 variables)**.

(a) Create a table using two variables `CLASS` and `GENDER` typing `table(CLASS, GENDER)`
(b) Create a table using two variables `GENDER` and `MARRIED` typing `table(GENDER, MARRIED)`
(c) How many female freshmen and male freshmen are there?
(d) How many married female students? How many unmarried male students?
(e) How many married freshmen are there? How many married seniors are there?

5. Create a **contingency table (3 variables)**.

(a) Create a table of `CLASS` by `MARRIED` for each `GENDER` by typing `table(CLASS, MARRIED, GENDER)`
(b) How many unmarried male sophomore are there? Married female seniors?

6. Summary Statistics.

(a) Calculate the mean GPA (or average GPA) by typing `mean(GPA)`
(b) Calculate the average weekly work hour by typing `mean(WORKHR)`,
(c) Calculate the median GPA by typing `median(GPA)`
(d) Calculate the median weekly work hour by typing `median(WORKHR)`
(e) What is the average GPA? Average weekly work hour?
(f) What is the median GPA? Median weekly work hour?
(g) What is the average car age? Average exercise hour?