Lab 01

Problem 1: Loading data

a) Write an R script to do the following:

1) Assign your student number to a variable called a.
2) Print out the variable a.
3) Update the variable a by setting a to the value of a modulo 9 (a modulo b is the remainder after integer division of a by b and the binary operator to do modulo in R is `%%` for example `print(7920 %% 9)`).
4) Update the variable a by adding 1 to a.
5) Print out the updated variable a.

Provide a screenshot of your R Studio session including the script you wrote in the editor, and the output of the script in the console. To take a screenshot in Windows, make sure R Studio is the active window and then press `Alt+PrtSc`.

(2 points)

b) The archive containing this lab also contains 10 datasets listed in the excel document *datasets.xlsx*. Each dataset has two files: One containing the data itself, and the other containing a description of the data. Each of these 10 datasets have been assigned identification numbers (dataset IDs). The first column of *datasets.xlsx* is the dataset ID. You will analyze the dataset with ID given by your student number modulo 9 plus one (we will call this the dataset with ID 'a'). Write an R script to do the following:

1) Load the data for the dataset with ID a using an appropriate call to `read.table` or to `read.csv`.

2) Compute the mean of the d-th column of the dataset, and assign a variable to this mean. Here d is given by the column number specified in the column *Column* in *datasets.xlsx* for the dataset with ID a.
3) Compute the median of that same column (and assign a variable to it; and for the remaining 3 computations, assign the result of the computation to a variable).
4) Compute the standard deviation of that column.
5) Compute the minimum of that column.
6) Compute the maximum of that column.
7) Print out each of the 5 summary statistics computed above to 3 decimal places. Use the variables you assigned in the previous steps in the code used to print (don't just 'hard code' the output by doing something like `print("3.142")`). Don't worry about leading line number indicators (like '`[1]`') in the output.

Make an R Markdown file with title *Lab01* and include your student ID below the title. Make a section called Problem 1b and write a sentence or two about what you did. Also give the **name** of the d-th column of the dataset you analyzed (according to the information file corresponding to the dataset you analyzed). Here d is the same d that was used in the steps above. Include the script you wrote for this problem in the markdown file, and also the output of the script. Compile your markdown file to html, and then convert the html to a pdf (by opening it in the web browser and printing to a pdf file). Provide the pdf.

(8 points)