DS 413/613 HOMEWORK 2

Instructions: For this homework assignment, produce an Rmarkdown file and a Word file as you have done for previous labs and the first homework assignment. For homework 2, however push your Word file to Github using the required commands from the Bash terminal. Create a new repository. **Use your first name and your last name as a name of your new repository**. When your push is complete and your Word file is registered in the new repository, email me the link (in the address bar at the top of the page) for your new repository.

Homework 2 problems

1) Enter and run **USArrests.** What type of information is shown in the data table **USArrests**? (Three or four sentences)

2) Use and show R coding that features a map function to show maximum values for all variables of the **USArerests** data frame. Which State has the largest number of Assaults according to the **USAressts** data frame ?

3) Install the nycflights13 package: install.packages**("nycflights13")** , call the following library: library**(nycflights13),** and thenenter **flights** (this will produce the **flights** data table)

4) Use and show R code that will indicate how many rows and how many columns the flights data has. Review and revisit your notes from STAT 412/612. Describe a tibble (two or three sentences). Now use and show R code that verifies that **flights** is a tibble

5) Now Use and show R code (featuring a map function) that will output the type of each column of the **flights** tibble.

6) Use and show R coding that features usage of a map function to find the slope and the intercept of models for the different levels of the **Species** variable of the **iris** data frame. For each model, Sepal.Width predicts Sepal.Length.

7)

**V <- list(12, 22, 27, 31.5, NA, 39, "east")**

**V**

For the given list above;

7a) Use and show R code to find the length of the list

7b) Use and show R code that will extract the missing value

7c) Use and show R code that will extract the third object

7d) Use and show R code that will extract the character string and the minimum number.

7e) Use one line of code to show that the seventh object is a character object.