Introduction to R – Practice material

28/2/20

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Answer the following questions and send me:
-a report containing your answers
-your R script

Deadline: 30/8/2020

1.Install and load the xlsx library

2. Modify the read.csv and read.table functions as appropriate in order to load the .txt and .csv iris datasets. Change the column names

3. Create vectors of 10 observations
- a numeric one, named "Age"
- a character one filled with random names for men and women, named "FirstName"
- a character one with 2 categories (Male and Female) and convert it to a factor, named "Sex"
- a logical one, named "Smoking"

4. Create a data frame with the previous 4 vectors

5. Which function(s) would you use to output
-basic descriptive statistics
-the type of each variable
-the number of columns
-the number of rows
from this data frame? -- present your proposals in a well-framed table

6. How many men are smoking? How many women are non-smokers?

7. Use xlsx library to load the iris.xlsx file

8. Using the same library, save the data frame you have created as .xlsx

9a. Write two functions that return
- the minimum value
- the sum of minimum and maximum values
of a vector
9b. Create a vector of 5 numeric observations (using 'seq') in [1,100] -- apply both functions here

10. Write a simple if...else control structure, that prints either "Yes" or "No" based on whether the condition you set is met

You can use different conditions in order to use as many relational operators you can (the rest of the structure can be the same)

12. Write a for loop
-create a vector of 5 numerical observations
-use a for loop that for each observation of the vector (1:length(inputvector)) calculates the square root of that observation

13. Create a list containing a vector (of 6 observations), a number, two characters and one NA
-How do you get the 4th observation of the vector?
-Update that list with a second vector of the same length
-Remove the last value of that second vector
-Remove the second vector completely