Homework 1: Introduction to R, Git, and GitHub

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For the next questions 3-8 you can find the scripts my repo ES207_hw, the code that I wrote following the instructions of the homework First_R_script.R and the evencount in a different script (evencount.R)

3.If I try to print the 4th element of x I got N/A, missing data, since the vector x only have three elements.

```
> x
[1] 1 2 4
> # [1] 1 2 4
> print(x)
[1] 1 2 4
> ## [1] 1 2 4
> x[3]
[1] 4
> ## [1] 4
> x[2:3]
[1] 2 4
> ## [1] 2 4
> #Question 6
> x[4]
[1] NA
> ## N/A #Does not exists a fourth element in the vector x
```

5.

```
> #Make R write some words
> paste("Remote","Sensing","is","covered","in","awesomesauce!")
[1] "Remote Sensing is covered in awesomesauce!"
> #Question 6, writing my name
> paste("José","Manuel","Rodríguez","Flores")
[1] "José Manuel Rodríguez Flores"
```

6. The objects are:

```
> ls()
[1] "a" "b" "c" "d" "m" "q" "s" "x" "y"
> ##[1] "a" "b" "c" "d" "m" "q" "x" "y"
> #remove m
> rm(m)
> ls()
[1] "a" "b" "c" "d" "q" "s" "x" "y"
> #Question 6 elements left after removing m
```

7. There are four odd numbers.

```
[1] 1 2 3 7 9
[1] "k is initialized as 0"
[1] "current x value being tested is 1"
[1] "1 is an odd number!"
[1] "k is currently 1"
[1] "current x value being tested is 2"
[1] "2 is an even number!"
[1] "k is currently 1"
[1] "current x value being tested is 3"
[1] "3 is an odd number!"
[1] "k is currently 2"
[1] "current x value being tested is 7"
[1] "7 is an odd number!"
[1] "k is currently 3"
[1] "current x value being tested is 9"
[1] "9 is an odd number!"
[1] "k is currently 4"
[1] "The final k is 4"
[1] 4
```

8. **evencount** script is in the ES207_hw1 Github repo (evencount.R)

9. The three main reasons I want to have a good project layout are:

- Too have organized the code, functions, data, paper and outputs.
- Keeps all our tools and data in the same space.
- Keeps track of all the work I do, which helps me to compare early versions of my results and working paper.
- Makes our time and work more efficient if I am working with multiple projects at the same time.
- Makes my project portable.
- Makes my project understandable for other people.

10. The three primary principles to follow in a good project layout are:

- Have a good structure (R directory, data directory, doc directory, fig directory, and output directory).
- Treat data as read only (Integrity of data) and treat outputs as disposable.
- Hard code the full name of each file or set the working directory at the beginning of the script file.

11. C:\Program Files\R\R-3.6.2 (Windows)

12. /usr/lib64/**R/** R-3.6.2 (Linux)

13. C:\Users\Jose Rodriguez\Box\Spring_2020\ ES207\ hw_01_intro_to_R_and_github.html (Windows)

14. ES207\ hw_01_intro_to_R_and_github.html (Windows)

15. /home/users/Jose Rodriguez/Box/Spring_2020/ES207/ hw_01_intro_to_R_and_github.html (Linux)

ES207/ hw_01_intro_to_R_and_github.html (Linux)

19 https://github.com/johnrfleck/water-tools/blob/master/general_groundwater.R

This code Graph USGS data for a specified groundwater monitoring well, first we must create the path to download the data from USGS)

20. Bingo Card created Star_wars.R

21. Account name: joserdgz8 https://github.com/joserdgz8