Assignment 6 _ Nabizadeh _ Tahereh

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Create an R package that includes two functions to perform the following tasks. All of your functions should be written clearly, with commented code, readable spacing, and be as non-repetitive as possible. Document your functions using Roxygen2 syntax. The Pythagorean theorem states that the square of the hypotenuse (the side opposite the right angle) is equal to the sum of the squares of the other two side: . Write a function that, given the lengths of two sides of the triangle, calculates the length of the third side. Note: This function should be flexible - that is, the function works if I give it values for and , or and , or and . If the user only provides the length of one side, the function should throw an error. Likewise, if the user provides the lengths of all three sides, the function should throw an error. If the user provides any values other than numeric values, the function should throw an error.

```
pythag <- function(a,b){
  if(is.numeric(a) == FALSE | is.numeric(b) == FALSE){return('I need numeric
values to make this work')}
  if(a > 0 & b > 0){return(sqrt((a^2)+(b^2)))}
  else{return('Values Need to be Positive')}
}

pythag(4,5)

## [1] 6.403124
```

Question: Write your own trimmed mean function that calculates the mean of a numeric vector ignoring the smallest and l largest values (this is a trimmed mean). Note: Your function should check if xhas at least s+l+1+1 values. If not, return some error message with stop().

Answer: **To find a trimming mean involves temporarily ignoring the highest and lowest t% of a sample. The example below shows a 10% trimmed mean takes the mean of values between quantiles 0.1 and 0.90.**

```
library(trimr)

trimming <- function(x){
  if(length(data)>2){return(print(mean(data,trim=0.10)))}
  else{return("length of data should be bigger than two")}
}

# Example

data=c(1:46)
trimming(data)
```

```
## [1] 23.5
```

GitHub

Question: Install Git, and create a Github account. Update your Github profile to include some relevant information about yourself, such as your program and/or interests. Submit the link to your profile.

***Answer*: https://github.com/thrhnabizadeh**

Question: Create a repository out of the R package you created in Homework 6. Add all your files, push to GitHub. Make sure your package can be installed from GitHub (Hint: `devtools::install_github()`). Submit the link to your repository.

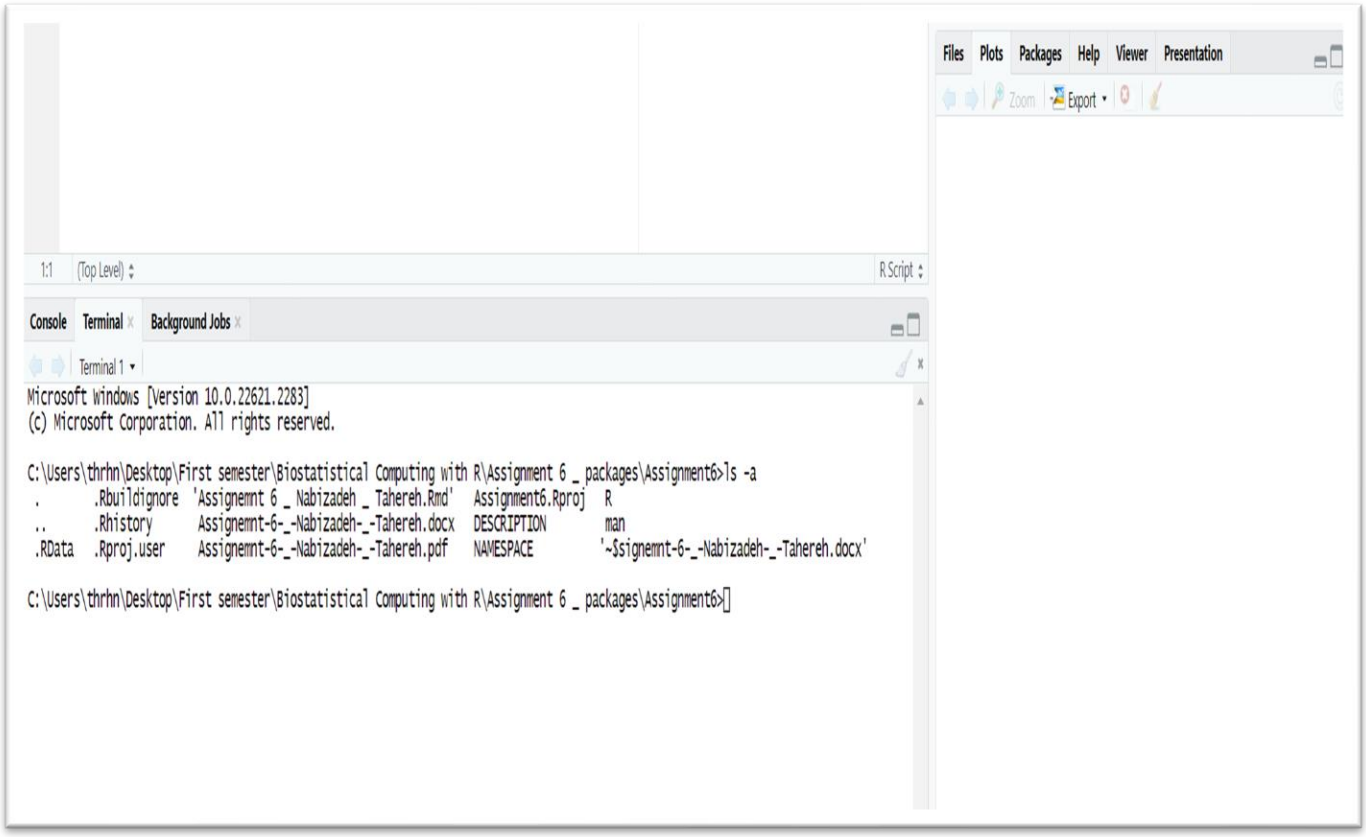
***Answer*: To do this task, I made a new repository on my github under the name assignment, and then commit all my codes to the new repository (Assignment), and made it public to be visible to everyone. Then on my r studio I made a new package repository under the name Assignment, and then from Git, I used shell and put the codes from crrent repository into the the shell, then commit and pushed the codes into the github. I used devtools:: install.github to install and run my package into the r studio.**

Answer: https://github.com/thrhnabizadeh/Assignment

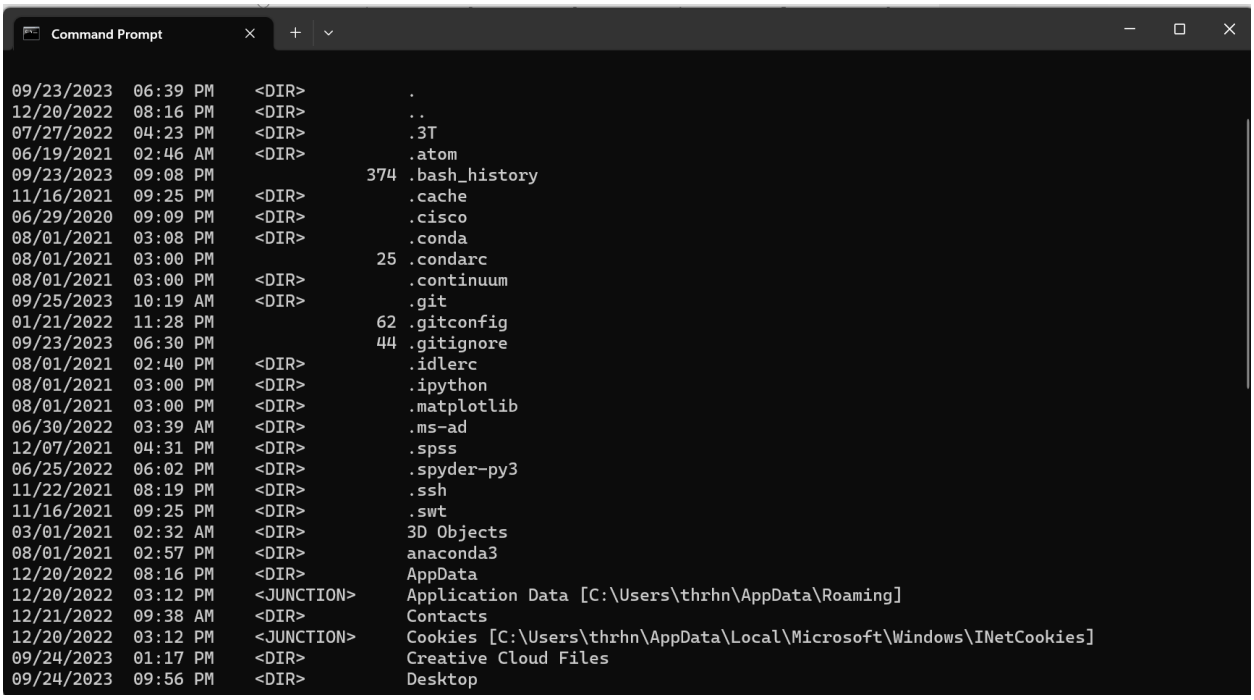
- **Question: In the command line, go to the hidden. git folder, list all files/folders. Describe and submit your observations.**

  Answer: Also, in my package repository on my r studio on the terminal section of this repository, I type IS -a

  I see these results (hidden files and folders):



Answer: Okay, I searched cmd in my windows search box and I saw this window coming up:



Then I type dir/a and I can see all the hidden files and folders as below: