Software Tools, R - Homework3

Due date : 30 Dec 2020, 23:59

Objectives

- Function
- Condition Statments
- Loops

Questions

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1 - A dependent function chain is defined as $h(x) = \frac{log(x)-1}{\sqrt{x}}$, $g(x) = e^{\sqrt{h(x)}}$ and $f(x) = sing(x)^{cosg(x)}$. Create a function and solve $f(x)$ for each **x <- 4:250**. Print and **plot** $f(x)$.

```r
my_fun <- function() {

x <- 4:250

# Fill here

plot(fx)

}
```

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2 - Create a function. Inside;

- Create **n** sizes random **x** vector which starts with minimum (**min**) and ends maximum (**max**) values
- Define a **threshold**. *(for example: my_threshold <- 500)*
- Find how many values in **x** vector are greater than the threshold. (you can assign as **big_numbers**)
- If there are no any **big_numbers**, print a sentence like 'There is no big number'
- Else print the size (or lenght) of **big_numbers**

```r
my_num <- function(n, min, max, threshold) {

# x <- runif(n,min,max)        # You can use runif() function or different function

# big_numbers <-    (you can use this to fidn which values are bigger than threshold: (x > threshold) )

# if

# else

}
```

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3 - Create a function that calculates the sum of each digit of any number *(For instance, sum of digits of 385102 is 3 + 8 + 5 + 1 + 2 = 19)*. While sum is lower than 50, then add 10 to sum in a loop. In every loop, print a warning sentence.

```r
sumofdig <- function(x) {

# You can use strsplit() function
# sum <-

# while ( ) {
#
# print("sum is lower than 50, so I am going to add more 10")
#
#   }

}
```

For questions or problems, please use Ninova

I inspired from Ismail SEZEN