SESSION 2: INTRODUCTION

Assignment 1

1. How many ways are there to call a function in R?

Answer: Function in R can be called in 3 ways

1. ***Function call by Name***: In this method, the argument name is been used along with value while calling the function.
2. ***Function call by Position***: In this method, only the value are been passed in the argument, but R assigns the value to the function variable based on their positions.
3. ***Function without arguments***: Here the function doesn't have any arguments

Example for function calling by name and by position

```
func1 <- function (left, right){
    print (paste("value of left is ", as.character(left) ))
    print (paste("value of right is ", as.character(right) ))
}
```

Function call by name

func1 (left=24, right=12)

```
> # Function call by name
> func1(left=24,right=12)
[1] "value of left is  24"
[1] "value of right is  12"
```

Function call by name

func1 (24, 12)

```
> # Function call by position
> func1(24,12)
[1] "value of left is  24"
[1] "value of right is  12"
```

Example for function calling without arguments

```
func2 <- function(){
   sumVal = 12 + 13
   print (paste("Additon of 12 and 13 is ", as.character(sumVal) ))
}
```

```
func2 <- function(){
+     sumVal <- 12 + 13
+     print (paste("Additon of 12 and 13 is ", as.character(sumVal) ))
+ }
> # Function call without arguments
> func2()
[1] "Additon of 12 and 13 is  25"
```

2. Is the below statement true?

• The lazy evaluation of a function means, the argument is evaluated only if it is evaluated only if it is used inside the body of the function. **TRUE**

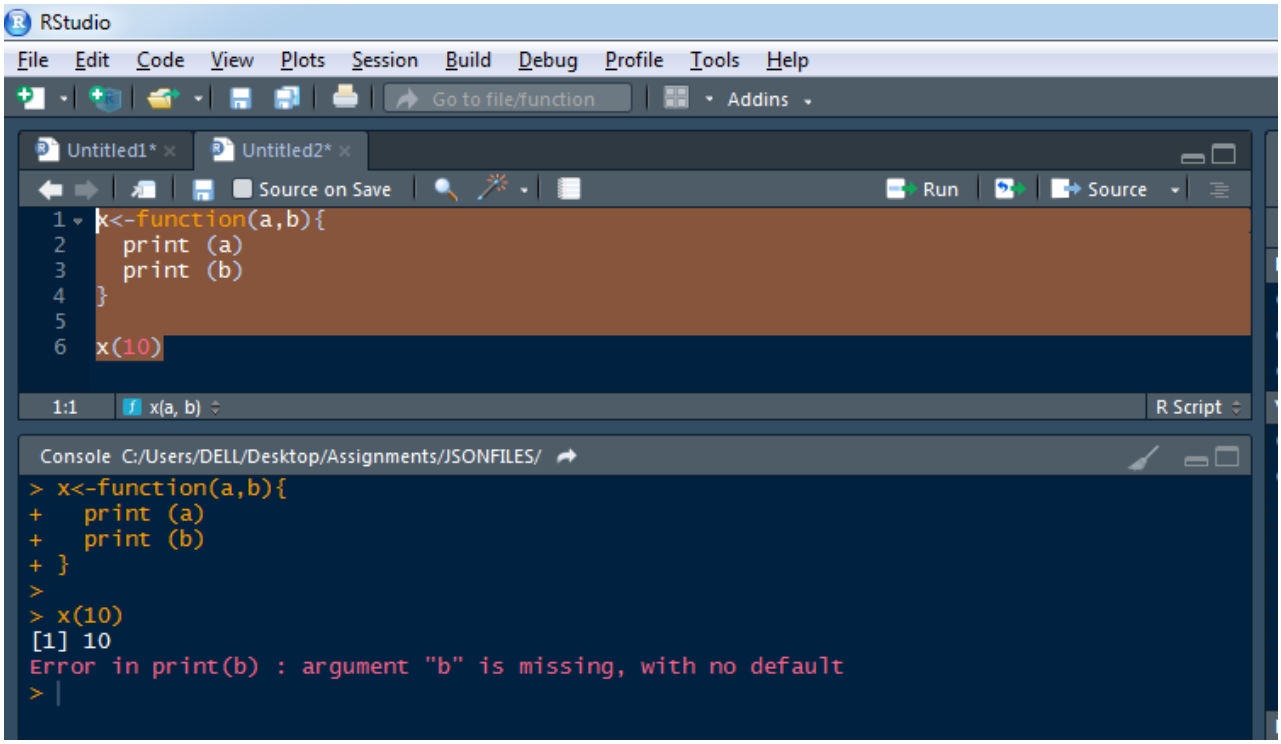
Lazy evaluation means an evaluation strategy which delays the evaluation of an expression until its value is needed and thus avoids repetitive evaluations

Example for Lazy evaluation

```
x<-function(a,b){
  print (a)
  print (b)
}

x(10)
```

Here only one value for a is been passed to the function calling by position,
When the function is called, first print statement is printing value of a
When the second print statement is trying to print value of b which is missing then we are getting error.
Means, the error is not thrown in the beginning of the function, rather, at run-time when the error raises.



3. Mention true or false for below statements:
   a. Insights driven from descriptive analytics is not meaningful. **FALSE**
   b. The number of values in each Elements of a list, should be equal. **FALSE**
   c. The datasets are not stored in memory of the computer using R. **FALSE**
   d. Data frames and matrices are two dimensional however the array is multidimensional. **TRUE**