SESSION 2-ASSIGNMENT 1

1. What are the different methods to call a function in R?

Syntax for Writing Functions in R

```
func_name <- function (argument) {
statement
}
```

Example of a Function

```
pow <- function(x, y) {
# function to print x raised to the power y
result <- x^y
print(paste(x,"raised to the power", y, "is", result))
}
```

Here, we created a function called pow().

It takes two arguments, finds the first argument raised to the power of second argument and prints the result in appropriate format.

We have used a built-in function paste() which is used to concatenate strings.

How to call a function?

```
>pow(8, 2)
[1] "8 raised to the power 2 is 64"
> pow(2, 8)
[1] "2 raised to the power 8 is 256"
```

the arguments used in the function declaration (x and y) are called formal arguments and those used while calling the function are called actual arguments.

Named Arguments

```
> pow(8, 2)
[1] "8 raised to the power 2 is 64"
> pow(x = 8, y = 2)
[1] "8 raised to the power 2 is 64"
> pow(y = 2, x = 8)
[1] "8 raised to the power 2 is 64"
```

In all the examples above, x gets the value 8 and y gets the value 2.

Default Values for Arguments

This is done by providing an appropriate value to the formal argument in the function declaration.

Here is the above function with a default value for y.

```
pow <- function(x, y = 2) {
# function to print x raised to the power y
result <- x^y
print(paste(x,"raised to the power", y, "is", result))
}
```

The use of default value to an argument makes it optional when calling the function.

```
> pow(3)
[1] "3 raised to the power 2 is 9"
> pow(3,1)
[1] "3 raised to the power 1 is 3"
```

Here, y is optional and will take the value 2 when not provided.

2. 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. Say True or False.

False

Lazy evaluation is an **evaluation** strategy which holds the **evaluation** of an expression until its value is needed

3. State True or False:

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.

True

d. Data frames and matrices are two dimensional however the array is multidimensional

True