Lab 2 Worksheet (Part 1)

Part 1 Instruction: Please download the file: **R_exe1.R** from the Week 2 section of Moodle. Once the download is complete, double click to open the file. Please complete the coding exercises and answer the following questions.

#1. Write down the code you will use for defining the variable “data2” as a vector of numbers from -100 to 100.

data2 = c(-100:100)

#2.
What is the variance of data1? 58.87375.

What is the range of data1? 19.9 - 2.5 = 17.4. Hint: use the function range( )

What is the use of the function diff():

This function gives the difference between two consecutive elements of a vector givens as input. For eg: diff(c(1, 2, 3)) -> 1, 1. The format of the difference obtained is diff[index+1] – diff[index]

#3. Please write down the code you will use to extract all the elements with even indices (e.g. 2, 4, 6):
Consider the vector for which we want the even indices = data1
Then we can get all the elements at even indices as follows = data1[2*c(1:(length(data1)/2))]

#4. Can you guess the functionality of “!=” : It means not equal to. The expression containing the != sign would be true if L.H.S is not equal to R.H.S.

Write down the code you will use to return elements less than or equal to 5:
Consider the vector for which we data from = data2
Then we can get all the elements less than 5 as follows = data2[data2<5]

#5. Can you guess what “data1^2” is doing?
This is basically squaring each element of the data1 vector. Eg: data1 = c(1, 2) then data1^2 = 1, 4

Congratulations! You’ve completed Part 1 of the coding exercise. Please wait for further instruction.