R NOTES

1. R studio is available on the following URL (in a linux machine)
   http://localhost:8787/
2. Get the information about the present working directory
   >getwd()
3. Set the present working directory
   >setwd()
4. Clear the R-terminal
   > CTRL-L
5. Check the content of the working directory
   > dir()
6. Delete all the variables which have been set
   > rm(list=ls())
7. Clear Graphics
   `> graphics.off()`
8. Set a variable
   > x ← 5
9. Set a vector
   > x ← c(1,2,3)
10. Create a sequence in on of the following ways
    > x ← seq(0.0.10,1.0)
    where the first two numbers are the lower and upper limits and the last is the step.
    > x← seq(from=0.0,to=10.0,by=1.0)
    has the same meaning as above.
    > x ← seq(from=0.0,by=10.0,length=11)
11. Plot a function
    plot(x,y,type='l',col='red')
    if we want to plot another plot also in the same panel we use 'lines'
    lines(x,z,type='l',col='blue')
12. Reading a table from the file :
    MyData ← read.table('file.dat')
    we can access the columns of the table with variables MyData$V1, MyData$V2 etc.

```
> graphics.off()
> cls=read.table('test_scalCls.dat')
> ls <- cls$V1
> Cl_TT <- cls$V2
> plot(ls,Cl_TT,type='l',col='red')
>plot(ls,Cl_TT,type='l',col='red',xlab='ls',ylab='Cl[in muK]')
```

13. Reading a CSV file :
    MyData ← read.csv('file.csv')
    We can check the columns headings to access the columns for example if we have two columns low and high then we can get those we MyData$low and MyData$high

> x← MyData$low
> y ← MyData$high
It is better to print the summary of CSV file with
>summary(MyData)

```
> graphics.off()
> rm(list=ls())
> getwd()
[1] "/home/jayanti/Programs/R/data"
> dir()
[1] "BSE500-2017.csv"               "BSE500.csv"
[3] "SENSEX-01012018-10012018.csv" "SENSEX-2015.csv"
[5] "SENSEX-2016.csv"               "SENSEX-2017.csv"
[7] "test_scalCls.dat"
> MyData <- read.csv('SENSEX-2017.csv')
> summary(MyData)
      Date              Open            High             Low          Close
 Min.   :26617   Min.   :26721   Min.   :26447   Min.   :26595
Mode:logical
 1st Qu.:29516   1st Qu.:29649   1st Qu.:29428   1st Qu.:29510
NA's:248
 Median :31324   Median :31372   Median :31192   Median :31278
 Mean   :30951   Mean   :31052   Mean   :30816   Mean   :30929
 3rd Qu.:32379   3rd Qu.:32472   3rd Qu.:32229   3rd Qu.:32373
 Max.   :34087   Max.   :34138   Max.   :33890   Max.   :34057
> x1 <- MyData$Data
> x1
NULL
> x1 <- MyData$Open
> plot(x1)
```

14. Probability Distributions