

Assignment-8
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Class : 3COE1

(a) Import the csv data file in R.

```
1 data <-read.csv(file.choose())
2 dim(data)
3 head(data)
```

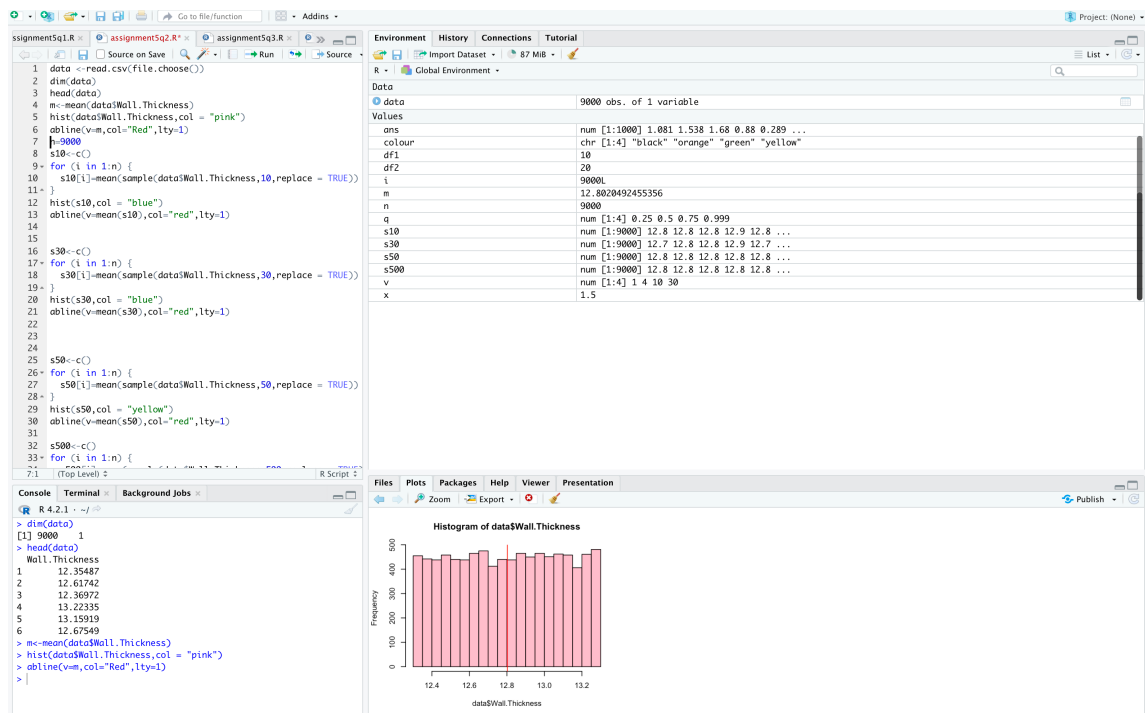
(b) Validate data for correctness by counting number of rows and viewing the top ten rows of the dataset.

```
1 data <-read.csv(file.choose())
2 dim(data)
3 head(data)
4 m<-mean(data$Wall.Thickness)
5 hist(data$Wall.Thickness,col = "pink")
6 abline(v=m,col="Red",lty=1)
7 n=9000
8 s10<-c()
9 for (i in 1:n) {
10   s10[i]=mean(sample(data$Wall.Thickness,10,replace = TRUE))
11 }
12 hist(s10,col = "blue")
13 abline(v=mean(s10),col="red",lty=1)
14
15
16 s30<-c()
17 for (i in 1:n) {
18   s30[i]=mean(sample(data$Wall.Thickness,30,replace = TRUE))
19 }
20 hist(s30,col = "blue")
21 abline(v=mean(s30),col="red",lty=1)
22
23
24
25 s50<-c()
26 for (i in 1:n) {
```

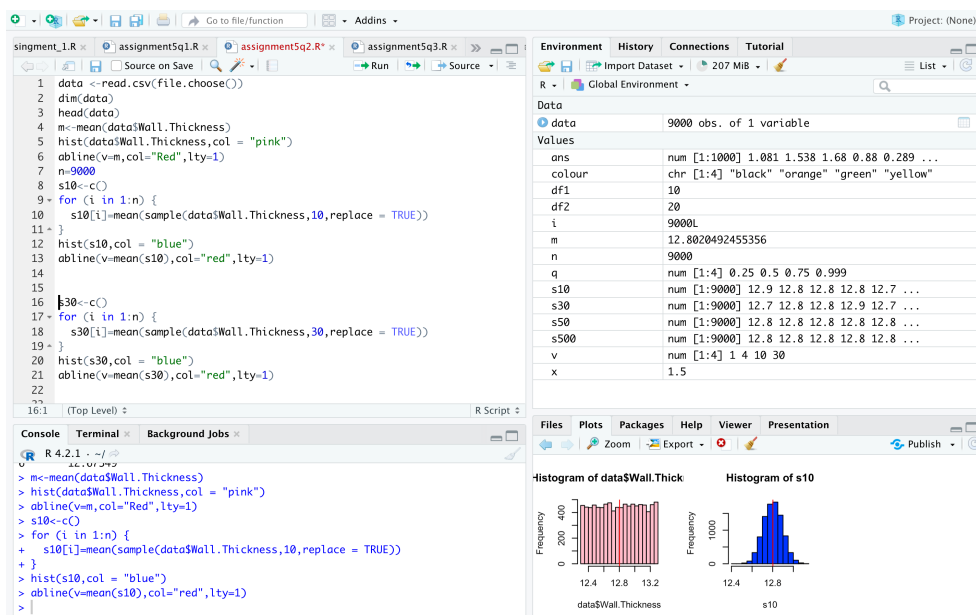
4:1 (Top Level) R Scrip

```
Console Terminal Background Jobs
R 4.2.1 ~ /
> dim(data)
[1] 9000 1
> head(data)
Wall.Thickness
1 12.35487
2 12.61742
3 12.36972
4 13.22335
5 13.15919
6 12.67549
>
```

- (c) Calculate the population mean and plot the observations by making a histogram.
 (d) Mark the mean computed in last step by using the function abline.



- (a) Draw sufficient samples of size 10, calculate their means, and plot them in R by making histogram. Do you get a normal distribution.



(b) Now repeat the same with sample size 50, 500 and 9000. Can you comment on what you observe.

