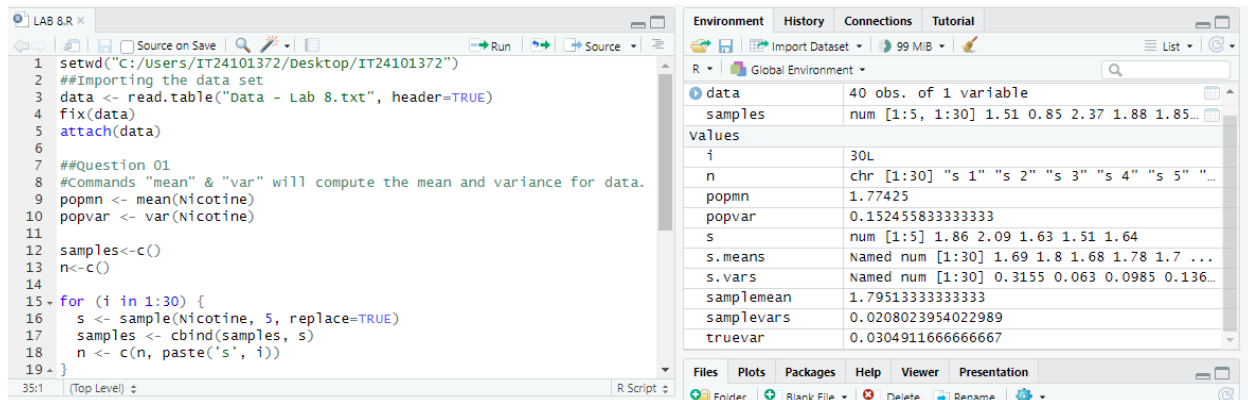


- IT 24101372
- Silva T.P.T.D
- Lab 8



The screenshot shows the RStudio interface. The script editor on the left contains the following code:

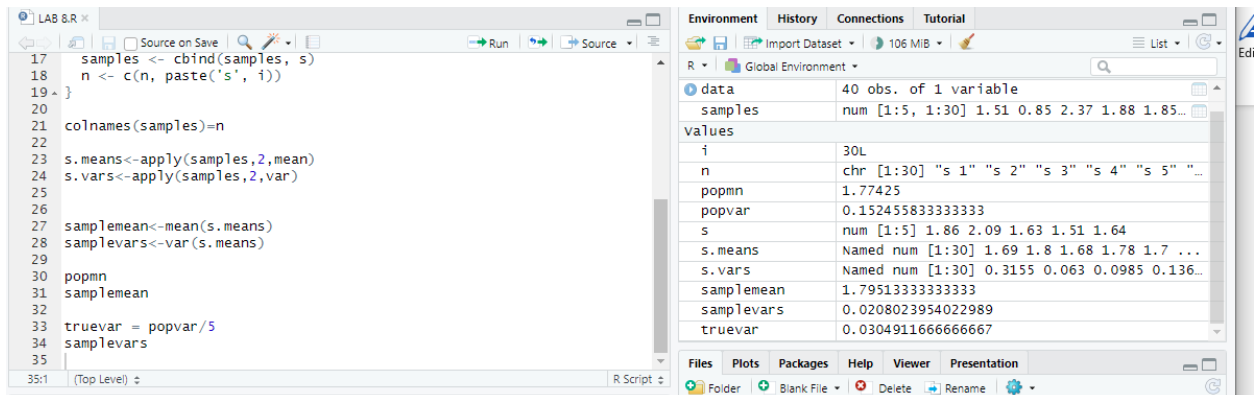
```

1 setwd("C:/Users/IT24101372/Desktop/IT24101372")
2 ##Importing the data set
3 data <- read.table("Data - Lab 8.txt", header=TRUE)
4 fix(data)
5 attach(data)
6
7 ##Question 01
8 #Commands "mean" & "var" will compute the mean and variance for data.
9 popmn <- mean(Nicotine)
10 popvar <- var(Nicotine)
11
12 samples<-c()
13 n<-c()
14
15 for (i in 1:30) {
16   s <- sample(Nicotine, 5, replace=TRUE)
17   samples <- cbind(samples, s)
18   n <- c(n, paste('s', i))
19 }

```

The Environment pane on the right shows the following objects:

Object	Class	Attributes	Values
data	data.frame	40 obs. of 1 variable	
samples	matrix	num [1:5, 1:30]	1.51 0.85 2.37 1.88 1.85...
i	chr	[1:30]	"s 1" "s 2" "s 3" "s 4" "s 5" ...
n	chr	[1:30]	"s 1" "s 2" "s 3" "s 4" "s 5" ...
popmn	num	[1]	1.77425
popvar	num	[1]	0.152455833333333
s	matrix	num [1:5, 1:30]	1.86 2.09 1.63 1.51 1.64
s.means	Named num	[1:30]	1.69 1.8 1.68 1.78 1.7 ...
s.vars	Named num	[1:30]	0.3155 0.063 0.0985 0.136...
samplemean	num	[1]	1.79513333333333
samplevars	num	[1]	0.0208023954022989
truevar	num	[1]	0.0304911666666667



The screenshot shows the RStudio interface with the script editor on the left containing the following code:

```

17 samples <- cbind(samples, s)
18 n <- c(n, paste('s', i))
19 }
20
21 colnames(samples)=n
22
23 s.means<-apply(samples,2,mean)
24 s.vars<-apply(samples,2,var)
25
26
27 samplemean<-mean(s.means)
28 samplevars<-var(s.means)
29
30 popmn
31 samplemean
32
33 truevar = popvar/5
34 samplevars
35

```

The Environment pane on the right shows the following objects:

Object	Class	Attributes	Values
data	data.frame	40 obs. of 1 variable	
samples	matrix	num [1:5, 1:30]	1.51 0.85 2.37 1.88 1.85...
i	chr	[1:30]	"s 1" "s 2" "s 3" "s 4" "s 5" ...
n	chr	[1:30]	"s 1" "s 2" "s 3" "s 4" "s 5" ...
popmn	num	[1]	1.77425
popvar	num	[1]	0.152455833333333
s	matrix	num [1:5, 1:30]	1.86 2.09 1.63 1.51 1.64
s.means	Named num	[1:30]	1.69 1.8 1.68 1.78 1.7 ...
s.vars	Named num	[1:30]	0.3155 0.063 0.0985 0.136...
samplemean	num	[1]	1.79513333333333
samplevars	num	[1]	0.0208023954022989
truevar	num	[1]	0.0304911666666667

