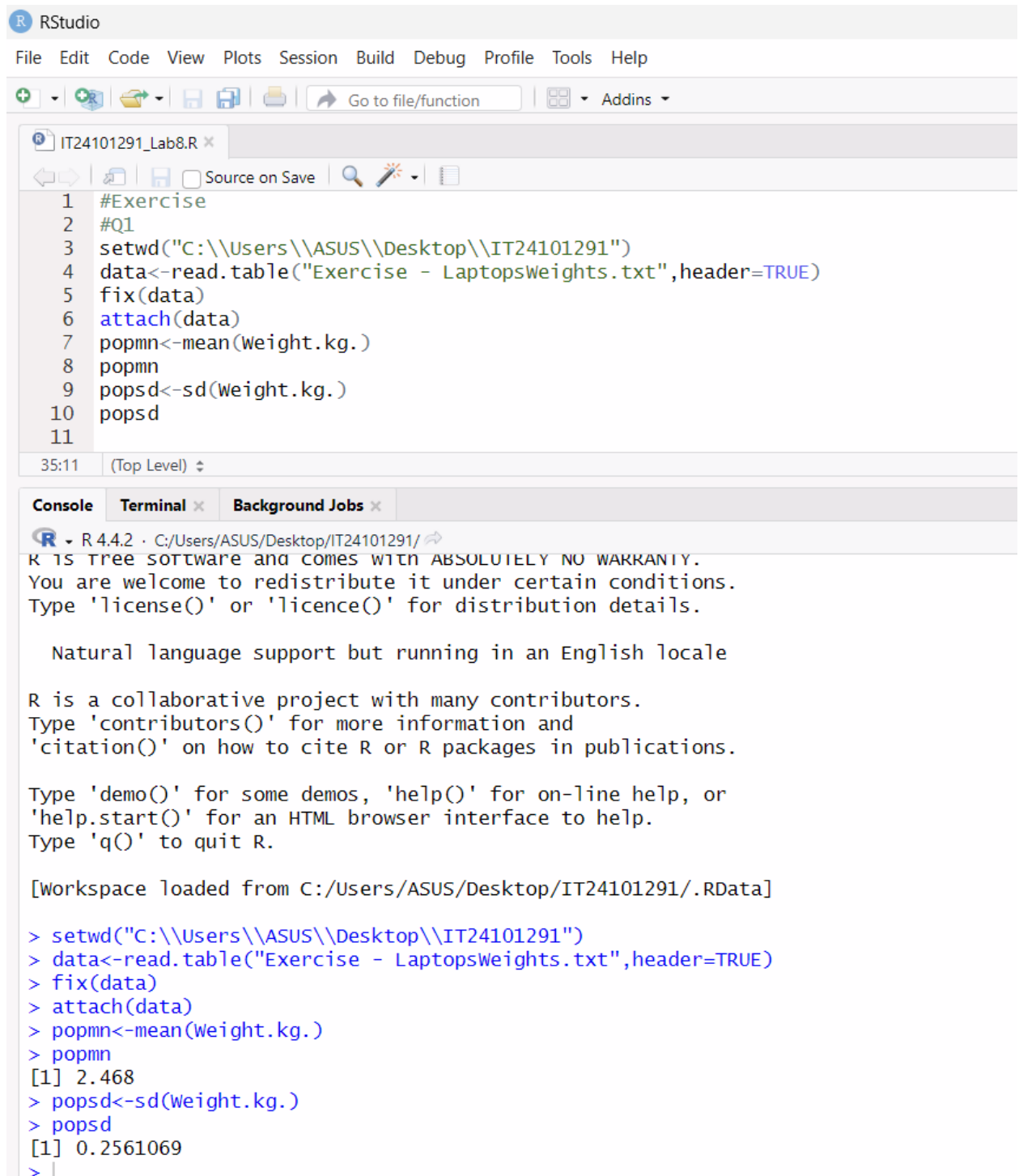


IT24101291

PS_Lab8

Q1)



The screenshot shows the RStudio environment. The script editor contains the following R code:

```
1 #Exercise
2 #Q1
3 setwd("C:\\Users\\ASUS\\Desktop\\IT24101291")
4 data<-read.table("Exercise - LaptopsWeights.txt",header=TRUE)
5 fix(data)
6 attach(data)
7 popmn<-mean(Weight.kg.)
8 popmn
9 popsd<-sd(Weight.kg.)
10 popsd
11
```

The console output shows the R startup message and the execution of the script:

```
R 4.4.2 · C:/Users/ASUS/Desktop/IT24101291/
R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

Natural language support but running in an English locale

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Workspace loaded from C:/Users/ASUS/Desktop/IT24101291/.RData]

> setwd("C:\\Users\\ASUS\\Desktop\\IT24101291")
> data<-read.table("Exercise - LaptopsWeights.txt",header=TRUE)
> fix(data)
> attach(data)
> popmn<-mean(Weight.kg.)
> popmn
[1] 2.468
> popsd<-sd(Weight.kg.)
> popsd
[1] 0.2561069
>
```

Q2)

The screenshot displays the RStudio interface. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. Below the menu is a toolbar with icons for file operations and a search bar labeled 'Go to file/function'. The main editor window shows a script named 'IT24101291_Lab8.R' with the following R code:

```
26 #Q3
27 #calculate the mean and standard deviation of the 25 sample means
28 samplemean<-mean(s.means)
29 samplemean
30 samplesd<-sd(s.sd)
31 samplesd
32
33 #state the relationship of them with true mean and true standard deviation
34 popmn
35 samplemean
36
37 truesd=popsd/5
38 samplesd
```

The status bar at the bottom of the editor indicates '21:31 (Top Level)'.

Below the editor is the 'Console' pane, which shows the output of the R code. The console output is as follows:

```
R - R 4.4.2 - C:/Users/ASUS/Desktop/IT24101291/
S 19      S 20      S 21      S 22      S 23      S 24
0.19825909 0.33140107 0.13731958 0.10028293 0.31481741 0.32379006
S 25
0.13396517
>
> #Q3
> #calculate the mean and standard deviation of the 25 sample means
> samplemean<-mean(s.means)
> samplemean
[1] 2.4614
> samplesd<-sd(s.sd)
> samplesd
[1] 0.104695
>
> #state the relationship of them with true mean and true standard deviation
> popmn
[1] 2.468
> samplemean
[1] 2.4614
>
> truesd=popsd/5
> samplesd
[1] 0.104695
>
```

Q3)