

Sri Lanka Institute of Information Technology



Lab Submission
Lab sheet No 05

IT24100936

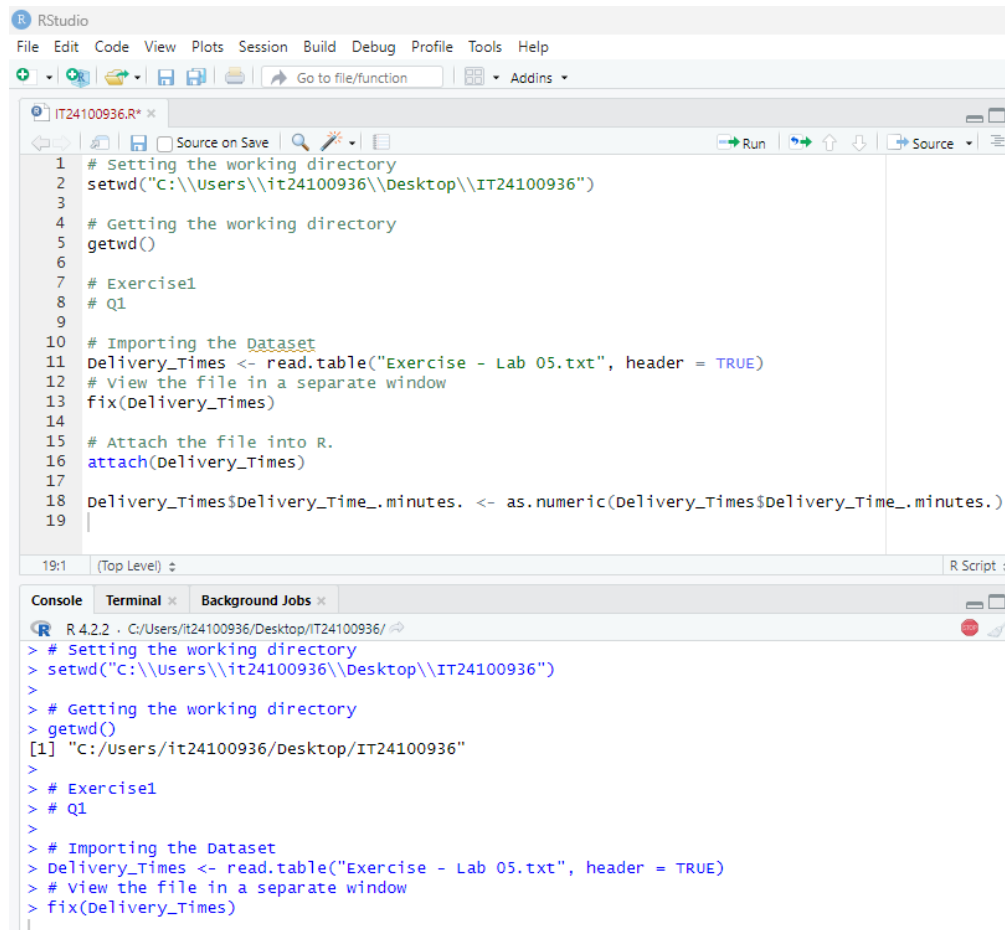
De Silva K. H. Y. S. T.

Probability and Statistics | IT2120

B.Sc. (Hons) in Information Technology

Exercise

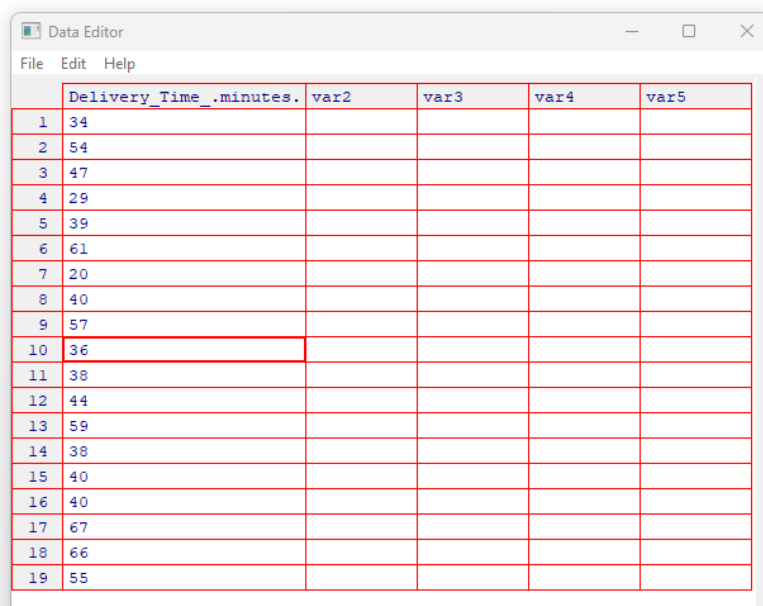
1)



```
1 # Setting the working directory
2 setwd("C:\\Users\\it24100936\\Desktop\\IT24100936")
3
4 # Getting the working directory
5 getwd()
6
7 # Exercise1
8 # Q1
9
10 # Importing the Dataset
11 Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
12 # view the file in a separate window
13 fix(Delivery_Times)
14
15 # Attach the file into R.
16 attach(Delivery_Times)
17
18 Delivery_Times$Delivery_Time_.minutes. <- as.numeric(Delivery_Times$Delivery_Time_.minutes.)
19
```

Console

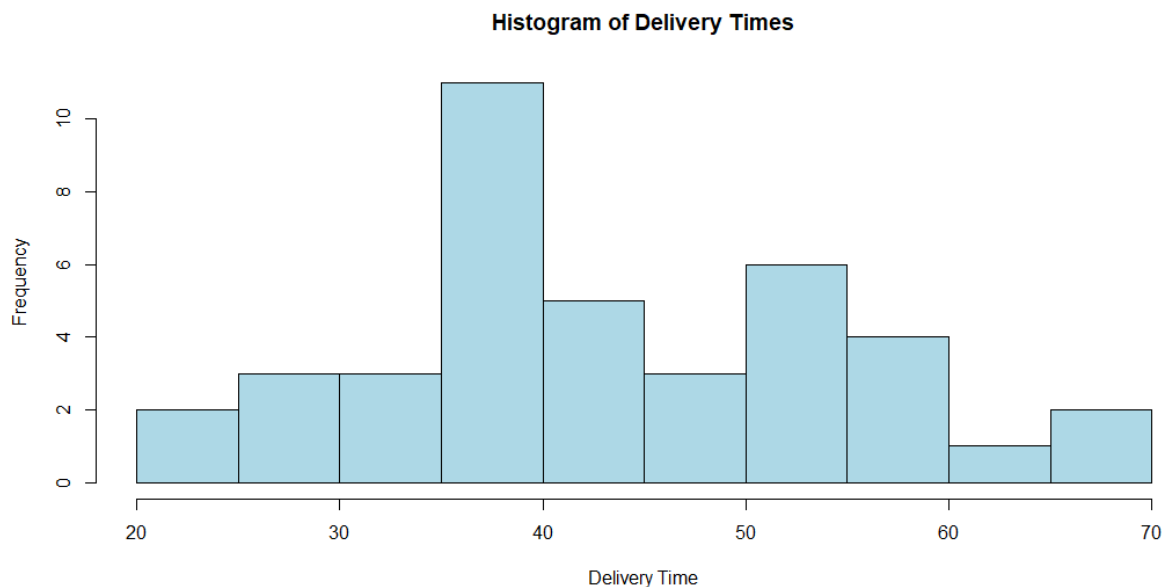
```
> # Setting the working directory
> setwd("C:\\Users\\it24100936\\Desktop\\IT24100936")
>
> # Getting the working directory
> getwd()
[1] "C:/Users/it24100936/Desktop/IT24100936"
>
> # Exercise1
> # Q1
>
> # Importing the Dataset
> Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
> # view the file in a separate window
> fix(Delivery_Times)
```



	Delivery_Time_.minutes.	var2	var3	var4	var5
1	34				
2	54				
3	47				
4	29				
5	39				
6	61				
7	20				
8	40				
9	57				
10	36				
11	38				
12	44				
13	59				
14	38				
15	40				
16	40				
17	67				
18	66				
19	55				

2)

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
+ + + + + Go to file/function + Addins
IT24100936.R* x
Source on Save Run Source
9
10 # Importing the Dataset
11 Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
12 # view the file in a separate window
13 fix(Delivery_Times)
14
15 # Attach the file into R.
16 attach(Delivery_Times)
17
18 Delivery_Times$Delivery_Time_.minutes. <- as.numeric(Delivery_Times$Delivery_Time_.minutes.)
19
20 # Q2
21 # Drawing the histogram for deliver times
22 hist(Delivery_Times$Delivery_Time_.minutes.,
23      breaks = seq(20, 70, by = 5),
24      right = TRUE,
25      col = "lightblue",
26      main = "Histogram of Delivery Times",
27      xlab = "Delivery Time",
28      ylab = "Frequency")
29
28:25 (Top Level) R Script
Console Terminal Background Jobs
R 4.2.2 C:/Users/it24100936/Desktop/IT24100936/
> # Getting the working directory
> getwd()
[1] "C:/Users/it24100936/Desktop/IT24100936/"
>
> # Exercise1
> # Q1
>
> # Importing the Dataset
> Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
> # View the file in a separate window
> fix(Delivery_Times)
>
> # Attach the file into R.
> attach(Delivery_Times)
The following object is masked from Delivery_Times (pos = 3):
    Delivery_Time_.minutes.
>
> Delivery_Times$Delivery_Time_.minutes. <- as.numeric(Delivery_Times$Delivery_Time_.minutes.)
> # Q2
> # Drawing the histogram for deliver times
> hist(Delivery_Times$Delivery_Time_.minutes.,
+      breaks = seq(20, 70, by = 5),
+      right = TRUE,
+      col = "lightblue",
+      main = "Histogram of Delivery Times",
+      xlab = "Delivery Time",
+      ylab = "Frequency")
> |
```



3)

```
30 # Q3
31 #The histogram shows a slightly right-skewed distribution,
32 #with a higher frequency of delivery times in the range of 30-50 minutes.
33 #There are fewer observations above 60 minutes.
```

4)

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
IT24100936.R*
22 hist(Delivery_Times$Delivery_Time_.minutes.,
23       breaks = seq(20, 70, by = 5),
24       right = TRUE,
25       col = "lightblue",
26       main = "Histogram of Delivery Times",
27       xlab = "Delivery Time",
28       ylab = "Frequency")
29
30 # Q3
31 #The histogram shows a slightly right-skewed distribution,
32 #with a higher frequency of delivery times in the range of 30-50 minutes.
33 #There are fewer observations above 60 minutes.
34
35 # Q4
36 # Draw a cumulative frequency polygon (ogive) for the data in a separate plot
37 cf <- cumsum(table(cut(Delivery_Times$Delivery_Time_.minutes., breaks = seq(20, 70, by = 5), right = TRUE)))
38
39 plot(seq(22.5, 67.5, by = 5), cf, type = "o", col = "blue",
40      xlab = "Delivery Time", ylab = "Cumulative Frequency",
41      main = "Cumulative Frequency Polygon (ogive)")
42
41:52 (Top Level) R Script
Console Terminal Background Jobs
R 4.2.2 C:/Users/IT24100936/Desktop/IT24100936/
> fix(Delivery_Times)
>
> # Attach the file into R.
> attach(Delivery_Times)
The following object is masked from Delivery_Times (pos = 3):
    Delivery_Time_.minutes.
>
> Delivery_Times$Delivery_Time_.minutes. <- as.numeric(Delivery_Times$Delivery_Time_.minutes.)
> # Q2
> # Drawing the histogram for deliver times
> hist(Delivery_Times$Delivery_Time_.minutes.,
+      breaks = seq(20, 70, by = 5),
+      right = TRUE,
+      col = "lightblue",
+      main = "Histogram of Delivery Times",
+      xlab = "Delivery Time",
+      ylab = "Frequency")
> # Q3
> #The histogram shows a slightly right-skewed distribution,
> #with a higher frequency of delivery times in the range of 30-50 minutes.
> #There are fewer observations above 60 minutes.
> # Q4
> # Draw a cumulative frequency polygon (ogive) for the data in a separate plot
> cf <- cumsum(table(cut(Delivery_Times$Delivery_Time_.minutes., breaks = seq(20, 70, by = 5), right = TRUE)))
>
> plot(seq(22.5, 67.5, by = 5), cf, type = "o", col = "blue",
+      xlab = "Delivery Time", ylab = "Cumulative Frequency",
+      main = "Cumulative Frequency Polygon (ogive)")
> |
```

Cumulative Frequency Polygon (Ogive)

