Sri Lanka Institute of Information Technology

Lab Submission
Lab sheet No 05

IT24100936

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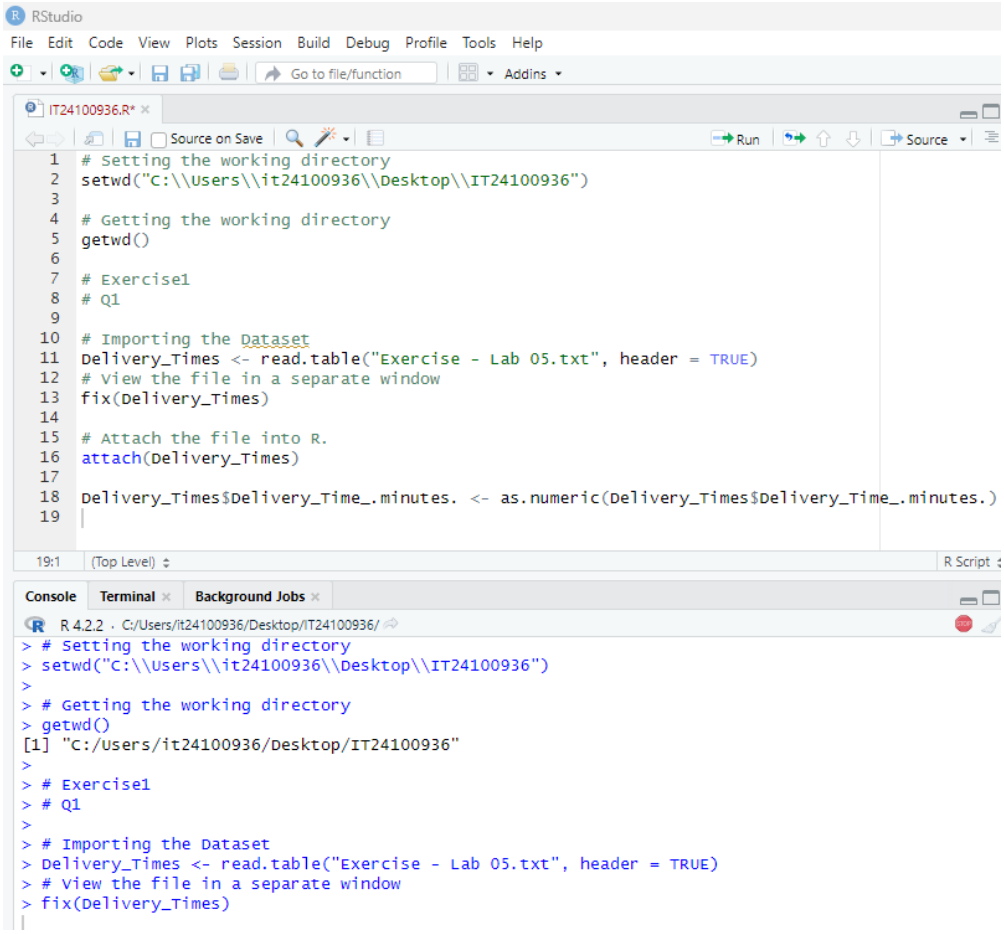
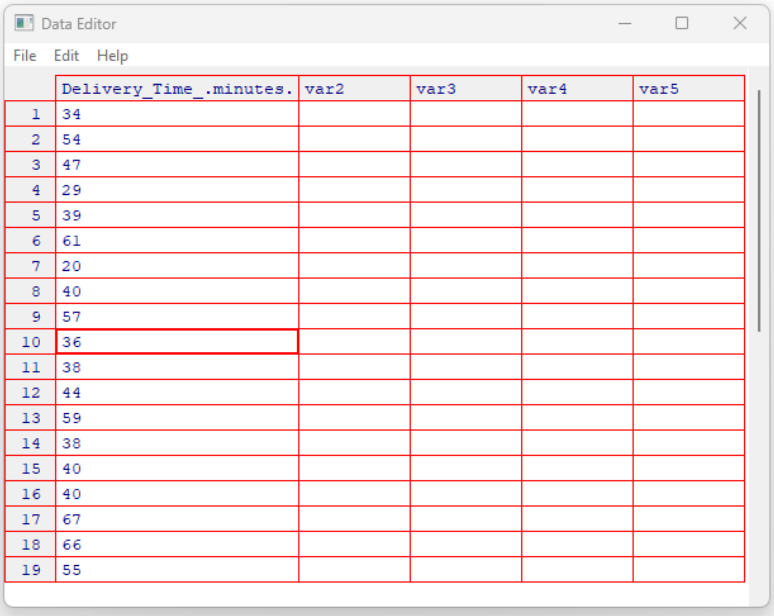
Probability and Statistics | IT2120

B.Sc. (Hons) in Information Technology

Exercise

1)



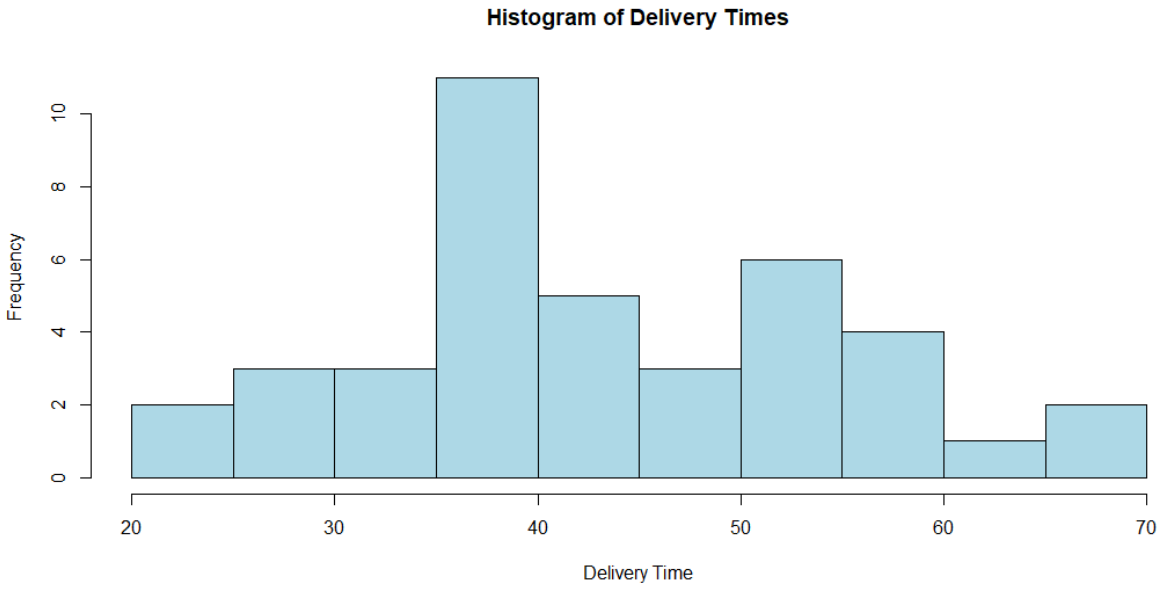


	Delivery_Time_.minutes.	var2	var3	var4	var5
1	34				
2	54				
3	47				
4	29				
5	39				
6	61				
7	20				
8	40				
9	57				
10	36				
11	38				
12	44				
13	59				
14	38				
15	40				
16	40				
17	67				
18	66				
19	55				

2)

```
# 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)

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")
```

```
> # 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)

```r
# 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.
```

4)

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

IT24100936.R*

```r
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)")
```

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)")
>
```