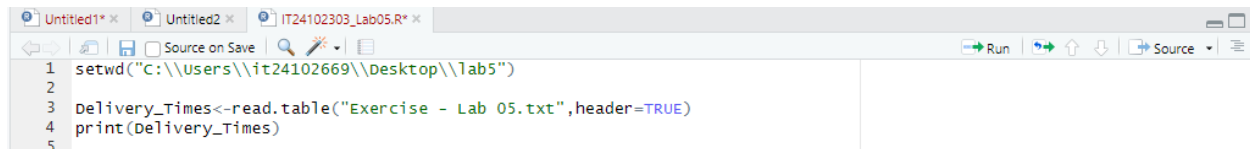


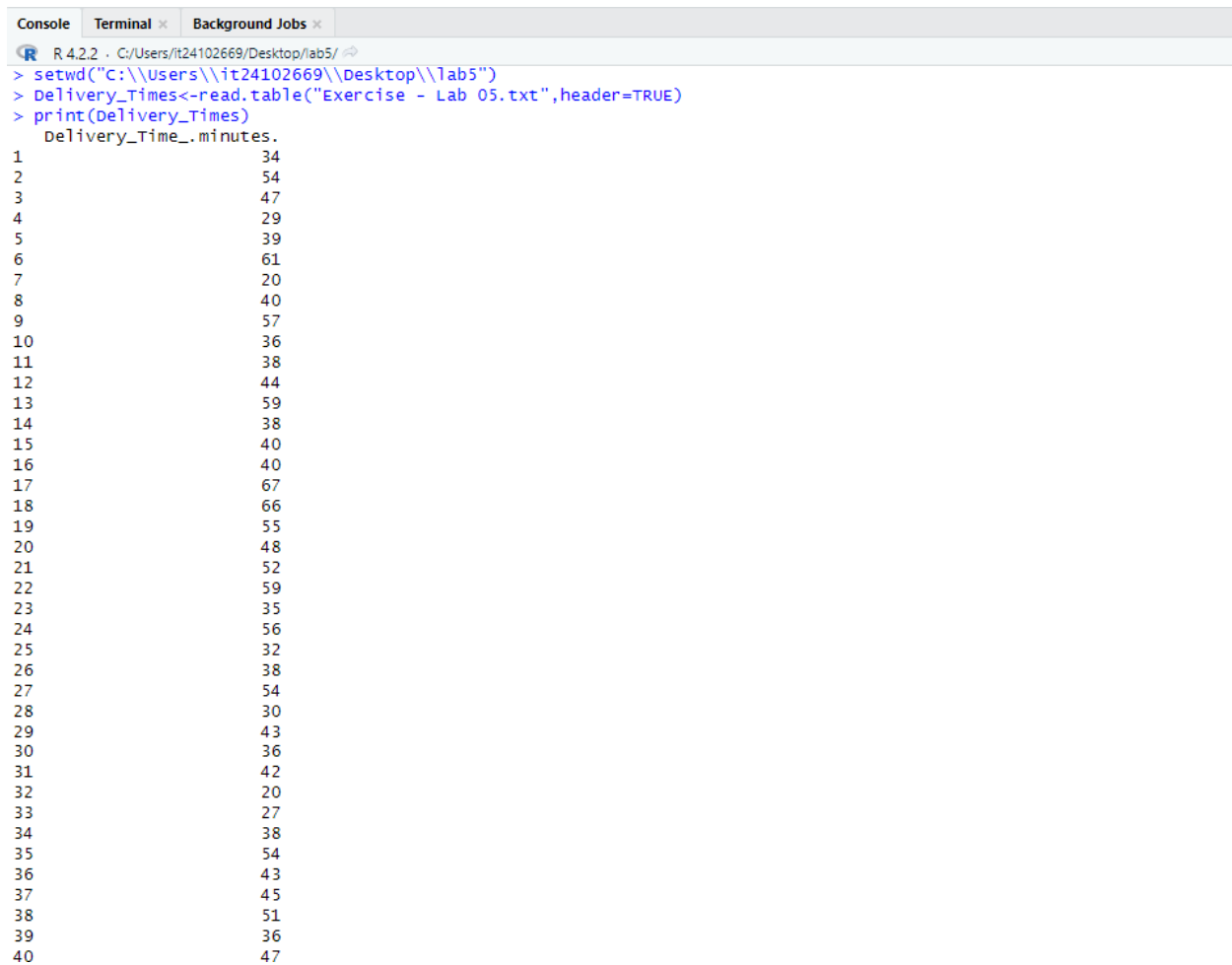
IT24102669

Sathsarani M.B.N.K.

1. Import the dataset ('Exercise – Lab 05.txt') into R and store it in a data frame called "Delivery Times".



```
1 setwd("C:\\Users\\it24102669\\Desktop\\lab5")
2
3 Delivery_Times<-read.table("Exercise - Lab 05.txt",header=TRUE)
4 print(Delivery_Times)
5
```

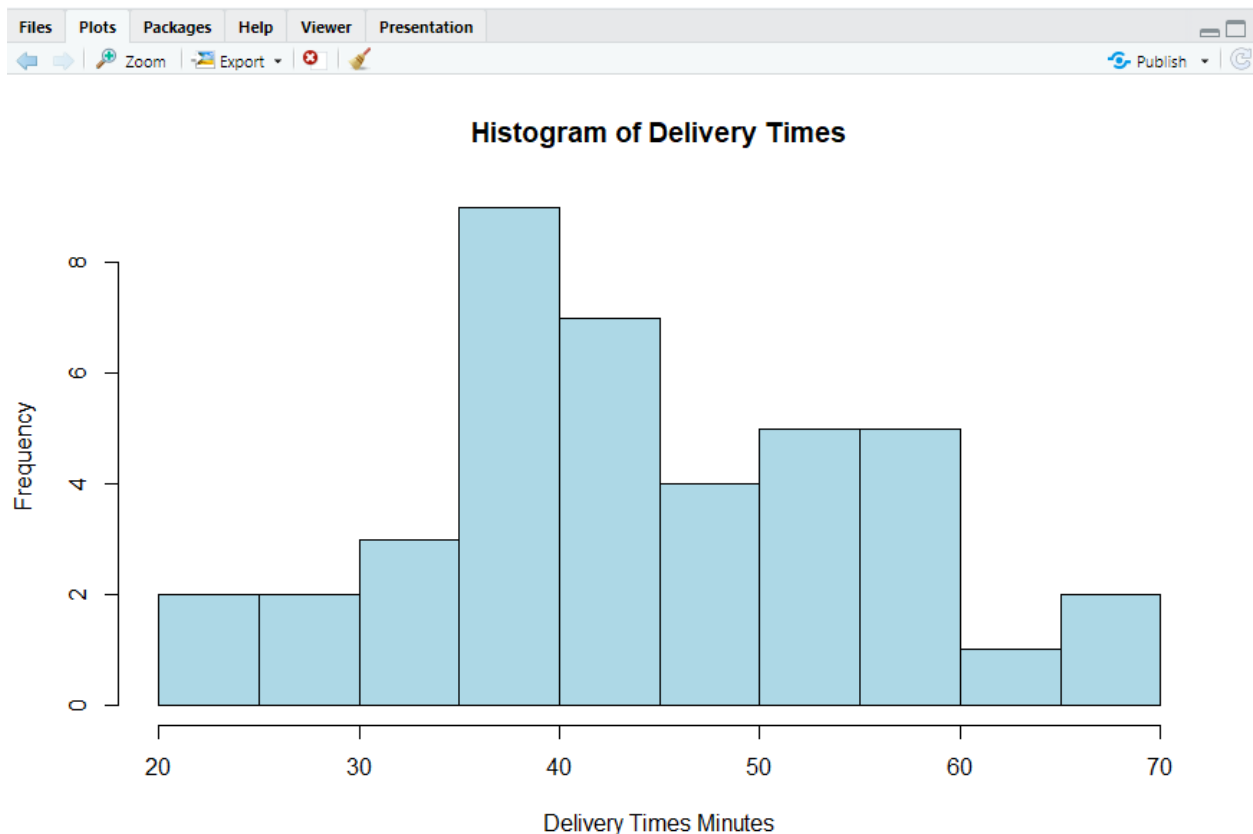


```
R 4.2.2 - C:/Users/it24102669/Desktop/lab5/
> setwd("C:\\Users\\it24102669\\Desktop\\lab5")
> Delivery_Times<-read.table("Exercise - Lab 05.txt",header=TRUE)
> print(Delivery_Times)
  Delivery_Time_.minutes.
1                      34
2                      54
3                      47
4                      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
20                     48
21                     52
22                     59
23                     35
24                     56
25                     32
26                     38
27                     54
28                     30
29                     43
30                     36
31                     42
32                     20
33                     27
34                     38
35                     54
36                     43
37                     45
38                     51
39                     36
40                     47
```

2. Draw a histogram for deliver times using nine class intervals where the lower limit is 20 and upper limit is 70. Use right open intervals.

```
6 hist(Delivery_Times$Delivery,  
7     breaks = seq(20, 70, by = 5),  
8     right = FALSE,  
9     main = "Histogram of Delivery Times",  
10    xlab = "Delivery Times Minutes",  
11    ylab = "Frequency",  
12    col = "lightblue",  
13    border = "black")  
14
```

```
> hist(Delivery_Times$Delivery,  
+     breaks = seq(20, 70, by = 5),  
+     right = FALSE,  
+     main = "Histogram of Delivery Times",  
+     xlab = "Delivery Times Minutes",  
+     ylab = "Frequency",  
+     col = "lightblue",  
+     border = "black")  
> |
```



3. Comment on the shape of the distribution.

```
#Based on the histogram, distribution is positively skewed
```

4. Draw a cumulative frequency polygon (ogive) for the data in a separate plot.

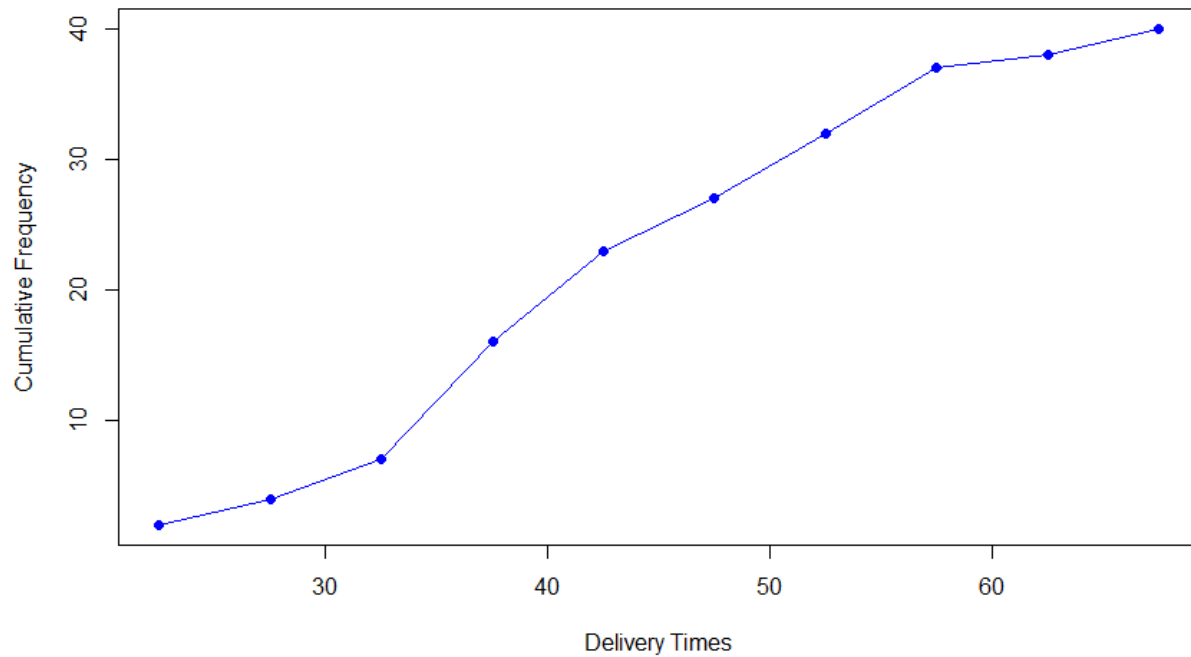
```
16 hist_data <- hist(Delivery_Times$Delivery,
17                   breaks = seq(20, 70, by = 5),
18                   right = FALSE,
19                   plot = FALSE)
20 |
21 cumulative_freq <- cumsum(hist_data$counts)
22
23
24 plot(hist_data$mids, cumulative_freq,
25      type = "o",
26      main = "Cumulative Frequency Polygon (ogive)",
27      xlab = "Delivery Times",
28      ylab = "Cumulative Frequency",
29      pch = 16,
30      col = "blue")
31
32
```

20:1 (Top Level) ↕

R Script ↕

```
> hist_data <- hist(Delivery_Times$Delivery,
+                   breaks = seq(20, 70, by = 5),
+                   right = FALSE,
+                   plot = FALSE)
> cumulative_freq <- cumsum(hist_data$counts)
>
> plot(hist_data$mids, cumulative_freq,
+      type = "o",
+      main = "Cumulative Frequency Polygon (ogive)",
+      xlab = "Delivery Times",
+      ylab = "Cumulative Frequency",
+      pch = 16,
+      col = "blue")
> |
```

Cumulative Frequency Polygon (Ogive)



Environment

History

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Tutorial

Import Dataset

186 MiB

List

R

Global Environment

Data

Delivery_Times

40 obs. of 1 variable

hist_data

List of 6

values

cum_freq

int [1:9] 2 5 11 20 26 29 35 38 40

cumulative_freq

int [1:10] 2 4 7 16 23 27 32 37 38 40