Sri Lanka Institute of Information Technology

Lab Submission
<Lab sheet No 05>

<IT24101474>

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Probability & Statistics | IT2120

B.Sc. (Hons) in Information Technology

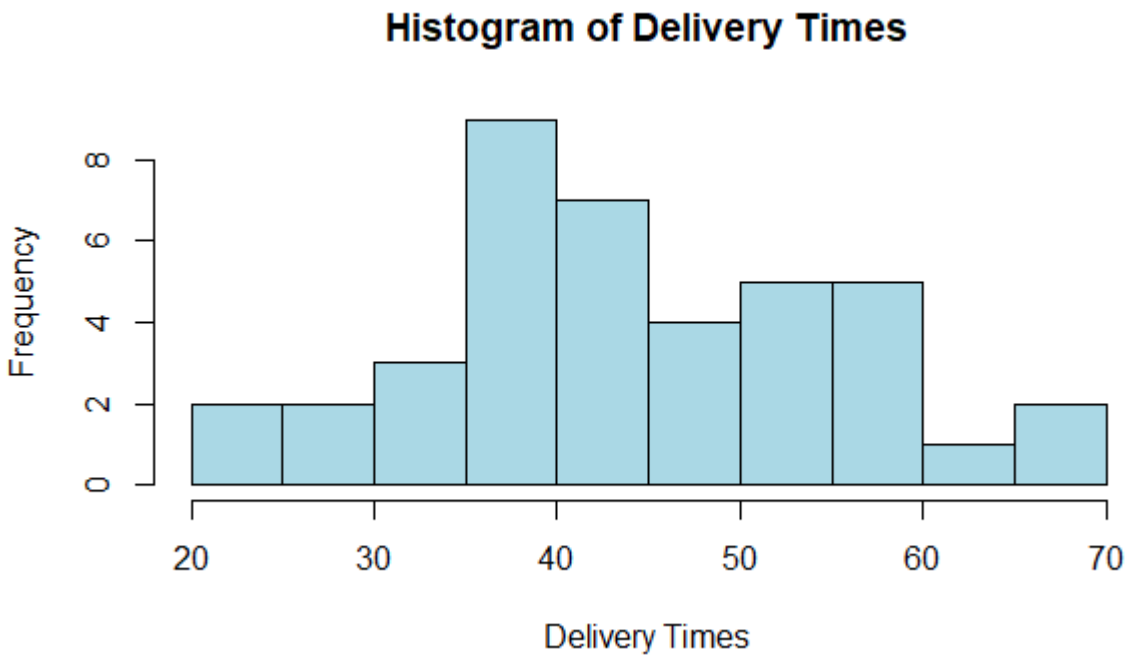
Exercise

1. Import the dataset (’ Exercise - Lab 05.txt’) into R and store it in a data frame called ” Delivery Times.

```
> setwd("C:\\Users\\IT24101474\\Desktop\\Lab05")
```

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.

```
> #Question 02
> 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
```

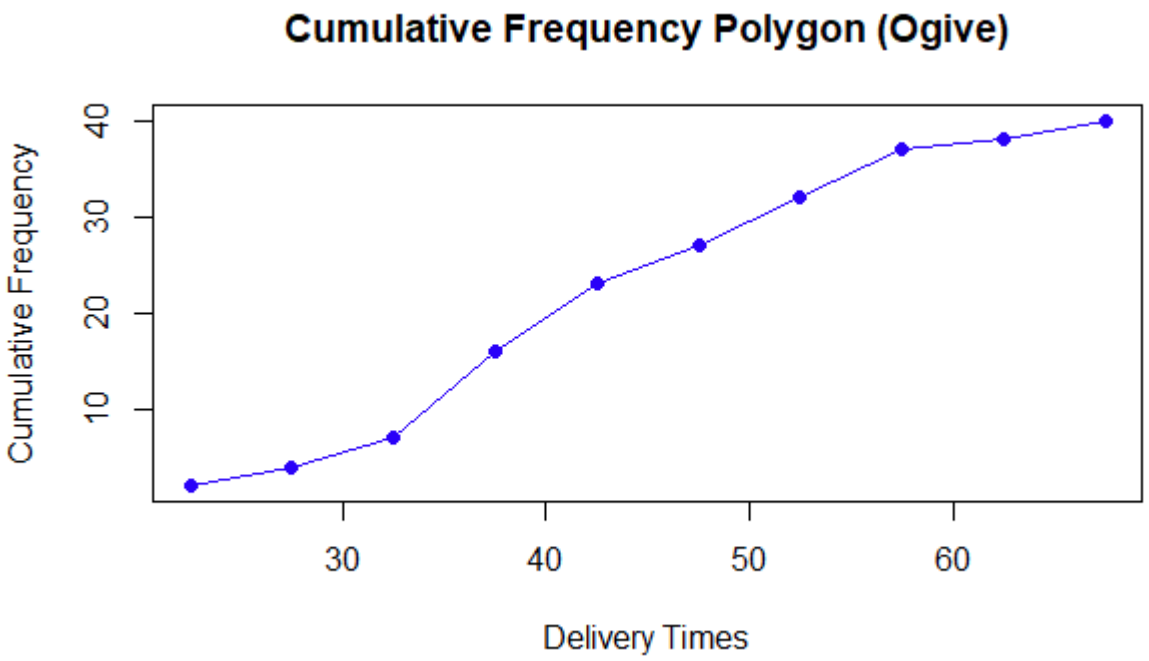


3. Comment on the shape of the distribution.

```
#Question 03
#The distribution appears to be slightly right-skewed with a peak around 35-40 minute
.
```

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

```
> #Question 04
> 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)
Cumulative Frequency
10
20
30
40
30
40
50
60
Delivery Times