PS LAB 5

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Exercise:

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

```
1  getwd()
2  setwd("D:\\SLIIT LECTURES\\Y2 S1\\Lab sheets & answers\\PS (IT2120)\\lab5")
3  getwd()
4
5  #1
6  Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
7  print(Delivery_Times)
```

```
> getwd()
[1] "C:/Users/User/Documents"
> setwd("D:\\SLIIT LECTURES\\Y2 S1\\Lab sheets & answers\\PS (IT2120)\\lab5")
> getwd()
[1] "D:/SLIIT LECTURES/Y2 S1/Lab sheets & answers/PS (IT2120)/lab5"
>
> Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
> #1
> 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                      29
```

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.

```
#2

hist(Delivery_Times$Delivery,
     breaks = seq(20, 70, length.out = 10),|
     right = FALSE,
     col = "skyblue",
     main = "Histogram of Delivery Times",
     xlab = "Delivery Time (minutes)",
     ylab = "Frequency")
```

```
> #2
>
> hist(Delivery_Times$Delivery,
+         breaks = seq(20, 70, length.out = 10),
+         right = FALSE,
+         col = "skyblue",
+         main = "Histogram of Delivery Times",
+         xlab = "Delivery Time (minutes)",
+         ylab = "Frequency")
>
```


Histogram of Delivery Times
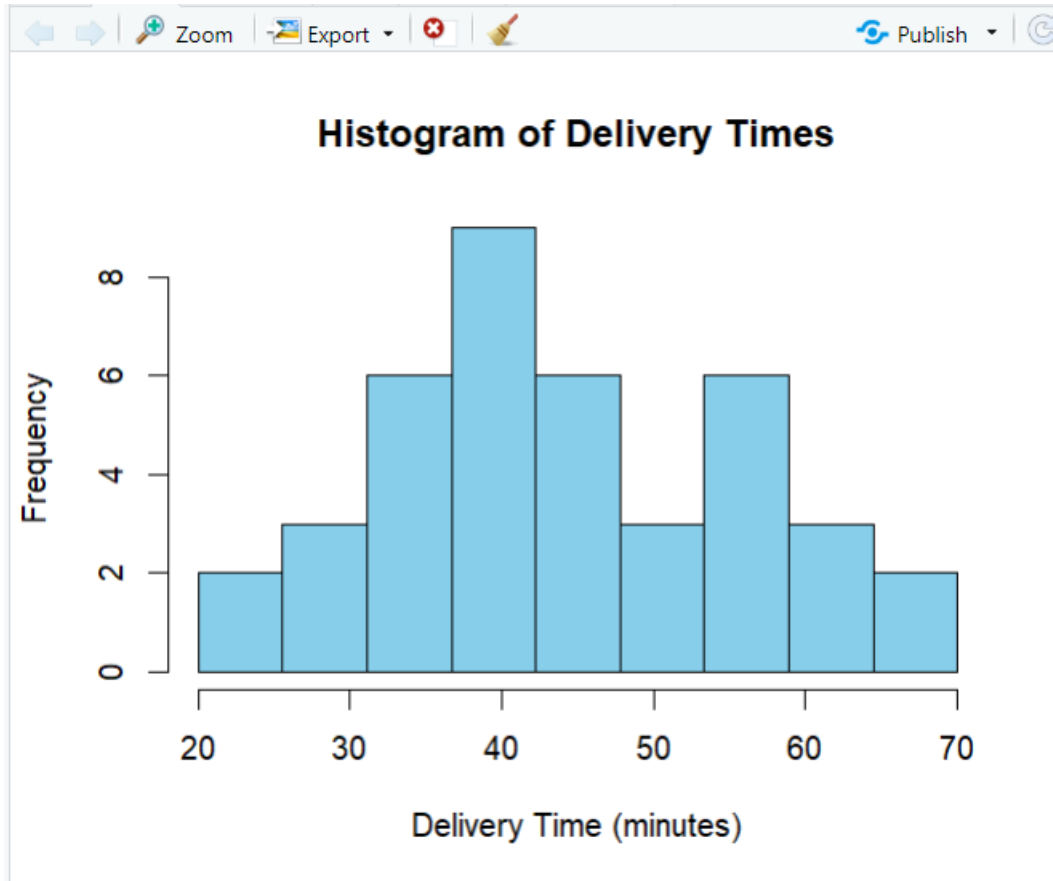
3. Comment on the shape of the distribution.

- This has approximately symmetric and slightly skewed shape distribution.

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

```
> #4
> #cumulative frequency polygon (ogive) for the data
>
> hist_data <- hist(Delivery_Times$Delivery,
+                       breaks = seq(20, 70, length = 10),
+                       right = FALSE,
+                       plot = FALSE)
> cumulative_freq <- cumsum(hist_data$counts)
> plot(hist_data$mids, cumulative_freq,
+      type = "o",
+      main = "Cumulative Frequency Polygon (Ogive)",
+      xlab = "Delivery Times",
+      ylab = "Cumulative Frequency",
+      pch = 16,
+      col = "navy")
> |
```


Cumulative Frequency Polygon (Ogive)