# IT24101694 – D N PANDITHARATHNA
Exercise

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

```
#Import the dataset
Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE, sep=",")
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
```
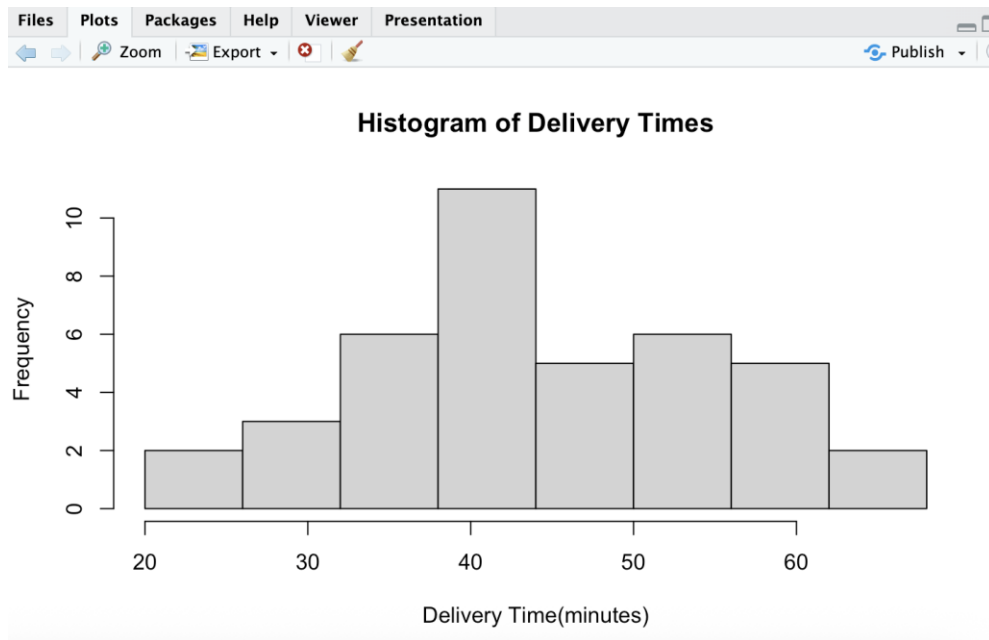
2. Draw a histogram for deliver times using nine class intervals where the lower limit is 20 and upper limit is 70. Use right open intervals.

```
#02
#Draw a histogram
hist(Delivery_Times$Delivery_Time,
     main = "Histogram of Delivery Times",
     xlab = "Delivery Time(minutes)",
     ylab = "Frequency",
     breaks=seq(20, 70, by=6),
     right=FALSE)
```

**Histogram of Delivery Times**



3. Comment on the shape of the distribution.

The distribution of delivery times is right-skewed, with the majority of delivery times falling between 30 and 45 minutes. A few higher values (above 50 minutes) extend the tail to the right.

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

```
#04
cum_freq <- cumsum(table(cut(Delivery_Times$Delivery_Time, breaks=seq(20, 70, by=5), right = FALSE)))
plot(seq(20, 65, by=5), cum_freq, type='o',
     main = "Cumulative Frequency Polygon(ogive) for Delivery Times",
     xlab="Delivery Time(minutes)",
     ylab="Cumulative Frequency",
     ylim=c(0, max(cum_freq)),
     pch=16)
```

**Cumulative Frequency Polygon(ogive) for Delivery Times**