

Dolamulla H.D.K.P.D

IT24103522

Probability and Statistics

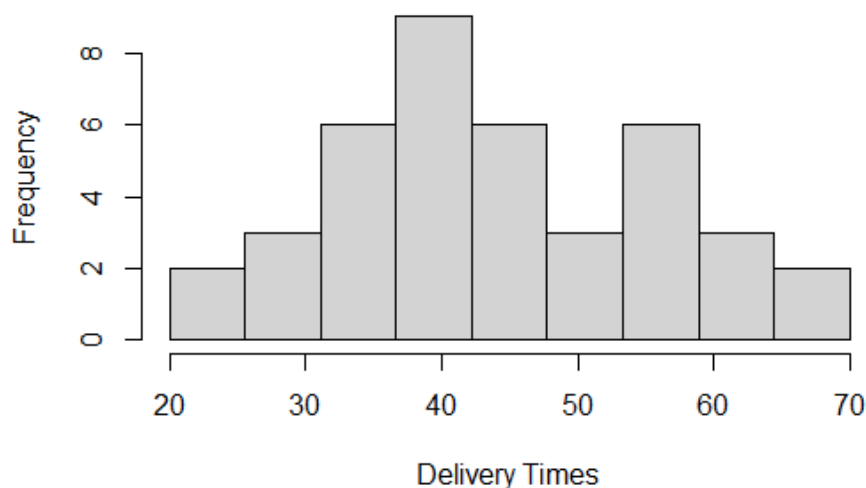
1. Import the dataset ('Exercise – Lab 05.txt') into R and store it in a data frame called "Delivery_Times".

```
1 setwd("C:/Users/it24103522/Desktop")
2 getwd()
3 Delivery_Times<- read.csv("Exercise - Lab 05.txt",header=TRUE, sep=",")
4 head(Delivery_Times)
> setwd("C:/Users/it24103522/Desktop")
> getwd()
[1] "C:/Users/it24103522/Desktop"
> Delivery_Times<- read.csv("Exercise - Lab 05.txt",header=TRUE, sep=",")
> head(Delivery_Times)
  Delivery_Time_.minutes.
1                      34
2                      54
3                      47
4                      29
5                      39
6                      61
```

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.

```
10 hist(Delivery_Times$Delivery_Time_.minutes,main = "Histogram for Deliver Times",breaks = seq(20,70,length=10),right=FALSE,xlab = "Delivery Times")
```

Histogram for Deliver Times



3. Comment on the shape of the distribution.
 - The bars are fairly balanced on both sides of the center (around 40 minutes) hence it is symmetric
4. Draw a cumulative frequency polygon (ogive) for the data in a separate plot.

```
12 freq_table <- table(cut(Delivery_Times$Delivery_Time_.minutes.,
13                          breaks = seq(20,70,by=5), right = FALSE))
14 freq_table
15
16
17 cum_freq<-cumsum(freq_table)
18
19
20 mindpoints<-seq(20,65,by=5)+2.5
21
22
23 plot(mindpoints,cum_freq,type="o",col="red",lwd=2,
24       xlab="Delivery Time minutes",
25       ylab="Cumulative Frequency",
26       main="Cumulative Frequency Polygon (ogive)")
27 grid()
```

Cumulative Frequency Polygon (ogive)

