# IT24103040 – Gamage GGJA

```
getwd()
setwd("C:\\Users\\IT24103040\\Desktop\\IT24103040")
Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE, sep = "\t")
fix(Delivery_Times)
names(Delivery_Times)<-c("X1")
attach(Delivery_Times)
#2
histogram<-hist(X1,main="Histogram for Delivery Times",xlab = "Delivery Time (minutes)",breaks = seq(20,70,lengt
breaks <- round(histogram$breaks)
freq <- histogram$counts
mids <- histogram$mids
cum.Freq <- cumsum(freq)
new <- c()
for(i in 1:length(breaks)){
  if(i==1){
    new[i] = 0
  }else{
    new[i] = cum.Freq[i-1]
  }
}
plot(breaks, new, type = "l",
     main="Cumulative Frequency Polygon (Ogive) for Delivery Times",
     xlab = "Delivery Time (minutes)", ylab = "Cumulative Frequency", ylim = c(0,max(cum.Freq)))
cbind(Upper = breaks, CumFreq = new)
```

```
> getwd()
[1] "C:/Users/IT24103040/Documents/lab5"
> setwd("C:\\Users\\IT24103040\\Desktop\\IT24103040")
> Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE, sep = "\t")
> fix(Delivery_Times)
> names(Delivery_Times)<-c("X1")
> attach(Delivery_Times)
>
> #2
> histogram<-hist(X1,main="Histogram for Delivery Times",xlab = "Delivery Time (minutes)",breaks = seq(20,70,length
=10), right=FALSE)
Error in plot.new() : figure margins too large
> #2
> histogram<-hist(X1,main="Histogram for Delivery Times",xlab = "Delivery Time (minutes)",breaks = seq(20,70,length
=10), right=FALSE)
> breaks <- round(histogram$breaks)
> freq <- histogram$counts
> mids <- histogram$mids
> cum.Freq <- cumsum(freq)
> new <- c()
> for(i in 1:length(breaks)){
+   if(i==1){
+     new[i] = 0
+   }else{
+     new[i] = cum.Freq[i-1]
+   }
+ }
> plot(breaks, new, type = "l",
+      main="Cumulative Frequency Polygon (Ogive) for Delivery Times",
+      xlab = "Delivery Time (minutes)", ylab = "Cumulative Frequency", ylim = c(0,max(cum.Freq)))
> cbind(Upper = breaks, CumFreq = new)
      Upper CumFreq
 [1,]    20       0
 [2,]    26       2
 [3,]    31       5
 [4,]    37      11
 [5,]    42      20
 [6,]    48      26
 [7,]    53      29
 [8,]    59      35
 [9,]    64      38
[10,]    70      40
```

Histogram for Delivery Times
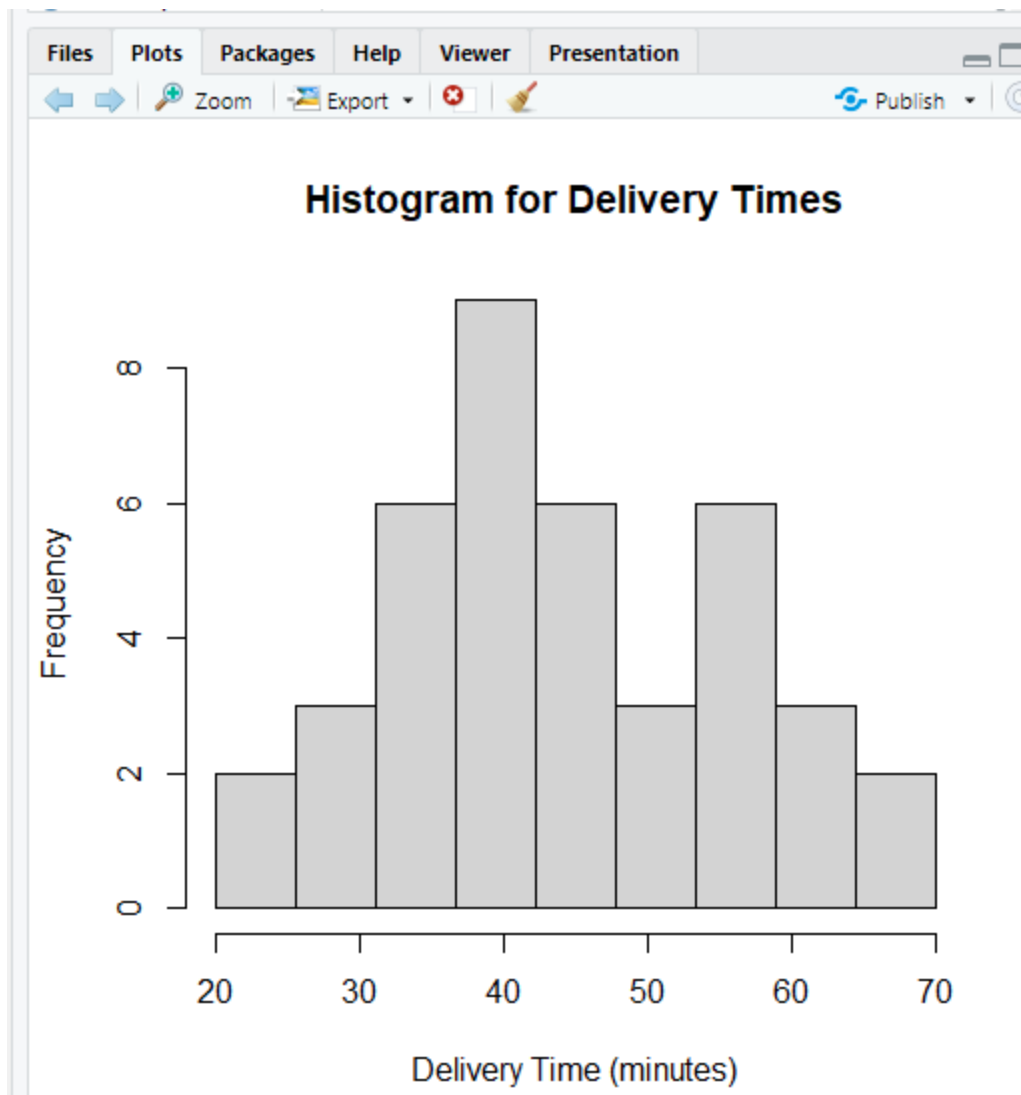
#3 - The histogram shows a roughly symmetric distribution of Delivery times, with the heighest frequency in the 35 -40 minute interval. There is no significant skewness and the frequencies taper

off gradually at both ends, indicating a balanced spread of delivery durations.

Cumulative Frequency Polygon (Ogive) for Delivery Tir

Delivery Time (minutes)