

Lab sheet 5

ID – IT24101571

Name – Balasooriya K.S.B

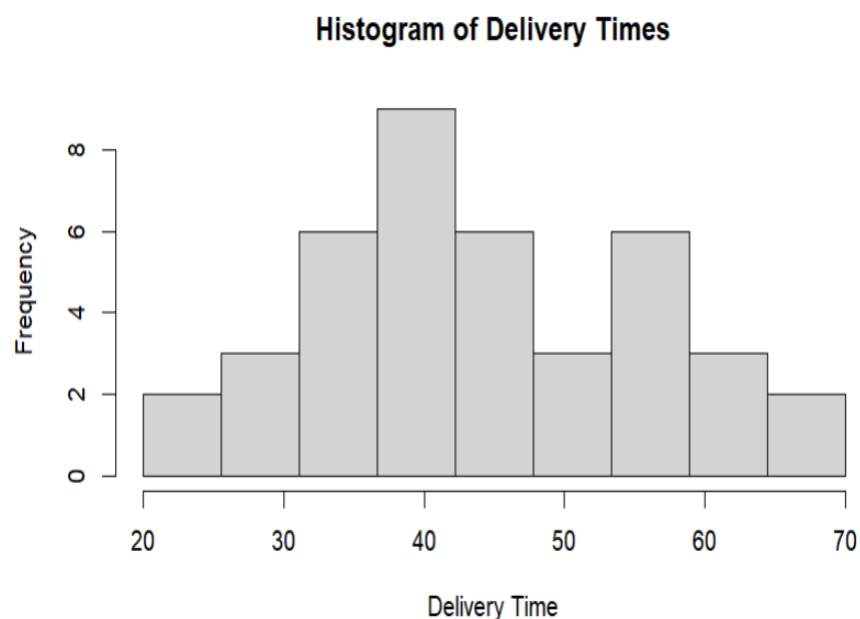
Exercise Instructions: Create a folder in your desktop with your registration number (Eg: "IT....."). You need to save the R script file and take screenshots of the command prompt with answers and save it in a word document inside the folder. Save both R script file and word document with your registration number (Eg: "IT....."). After you finish the exercise, zip the folder and upload the zip file to the submission link.

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

```
setwd("C:\\Users\\User\\Desktop\\IT24101571")  
getwd
```

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.

```
hist(Delivery_Time$Delivery_Time,  
     main = "Histogram of Delivery Times",  
     breaks = seq(20, 70, length.out = 10), # 10 breakpoints for 9 intervals  
     right = TRUE,  
     xlab = "Delivery Time",  
     ylab = "Frequency")
```



3. Comment on the shape of the distribution.

The histogram shows a right-skewed distribution with most delivery times concentrated towards the lower end.

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

```
# 4. Draw a cumulative frequency polygon (ogive) for the data in a separate plot
cum_freq <- cumsum(histogram$counts) # Calculate cumulative frequency
mids <- histogram$mids # Midpoints of the intervals

# Plot the cumulative frequency polygon
plot(mids, cum_freq, type='o', main="Cumulative Frequency Polygon for Delivery Times",
     xlab="Delivery Time (minutes)", ylab="Cumulative Frequency", ylim=c(0, max(cum_freq)),
     pch=19, col="blue")

# Optionally, you can add a grid for better visualization
grid()
```

