Sri Lanka Institute of Information Technology

Lab Submission
<Lab sheet 05>

<IT24104201>

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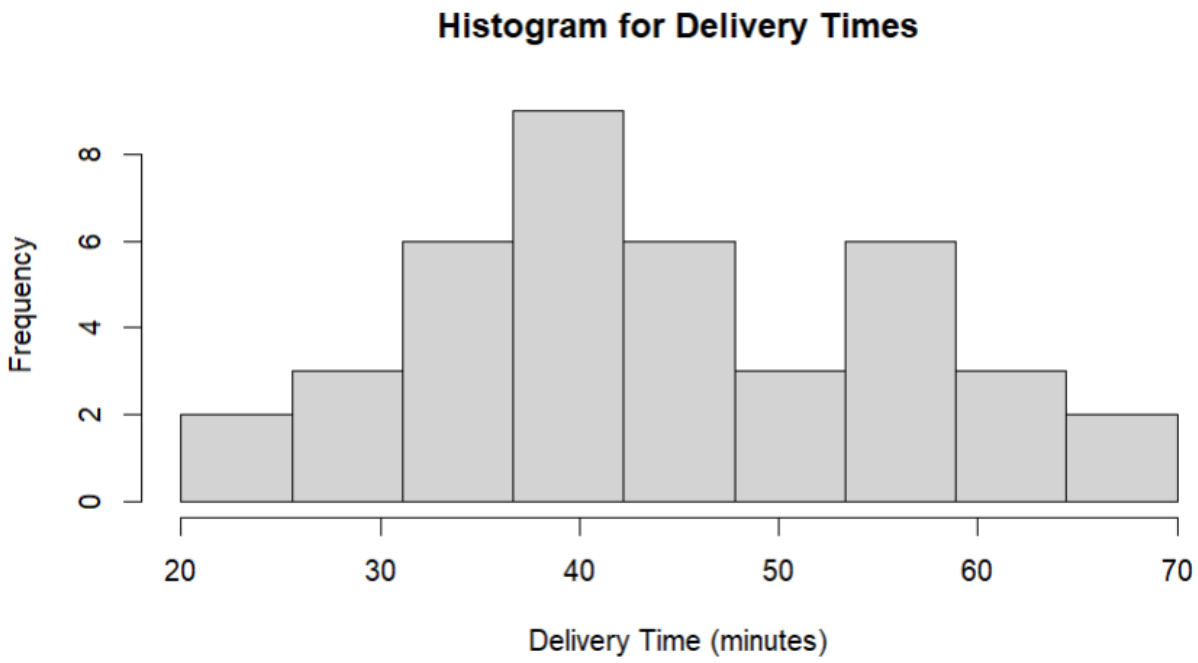
Probability and Statistics - IT2120

B.Sc. (Hons) in Information Technology

Exercise

1.
```r
#(1)
Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
fix(Delivery_Times)
attach(Delivery_Times)
`Delivery_Time_(minutes)`
```

2.
```r
#(2)
hist(Delivery_Times$DeliveryTime,
     main = "Histogram for Delivery Times",
     xlab = "Delivery Time (minutes)",
     ylab = "Frequency",
     breaks = seq(20, 70, length.out = 10),
     right = FALSE)
```



3. The distribution is likely **right-skewed** (or positively skewed). This means most of the delivery times are clustered at the lower end of the range (closer to 20), with a long tail extending toward higher delivery times (closer to 70).

4.

```r
#(4)
hist_data <- hist(Delivery_Times$Deliver_Times,
                  breaks = seq(20, 70, length.out = 10),
                  right = FALSE,
                  plot = FALSE)

cum_freq <- cumsum(hist_data$counts)

plot(hist_data$breaks[-1], cum_freq,
     type = "o",
     main = "Cumulative Frequency Polygon (Ogive)",
     xlab = "Delivery Time (minutes)",
     ylab = "Cumulative Frequency",
     col = "black")
```