SLIIT UNI
THE KNOWLEDGE UNIVERSITY

Faculty of Computing

Year 2 Semester 1 (2025)

IT2120 - Probability and Statistics Lab Sheet 05

```
> setwd("C:\\Users\\USER\\OneDrive - Sri Lanka Institute of Information Technology\\Desktop\\New folder\\IT24102760")
```

1)

```
> Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
```

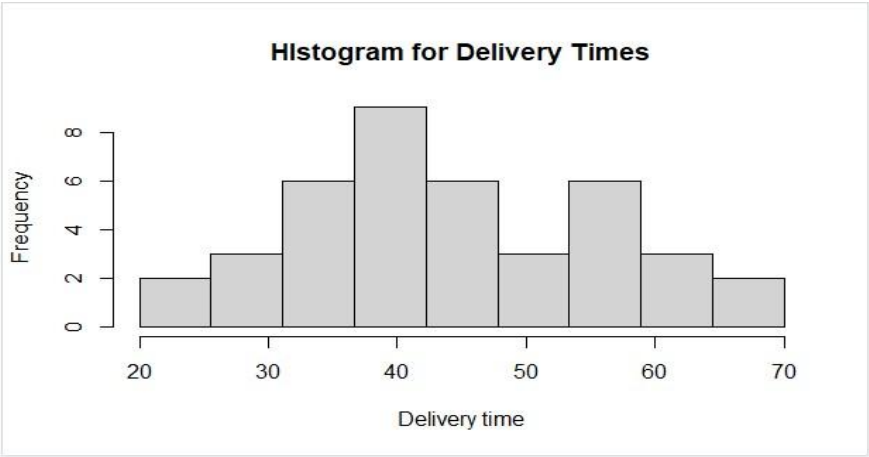
```
> names(Delivery_Times) <- c("Time")
```

```
> attach(Delivery_Times)
```

2)

```
> breaks <- seq(20,70, length.out = 10)
```

```
> hist(Time, breaks = breaks, right = FALSE, main = "HIstogram for Delivery Times", xlab = "Delivery time", ylab = "Frequency")
```



4) The histogram appears to be right-skewed, with more delivery times concentrated in the lower range (20–35) and a gradual decrease in frequency as the delivery times increase.

There may also be a slight bimodal distribution with a secondary peak around the 40-45 mark.

5)

```
> freq <- h$counts
> cum_freq <- cumsum(freq)
> new <- c(0, cum_freq)
> plot(breaks, new, type = "l", main = "Cumulative Frequency Polygon (Ogive) for Delive
ry Times",
+      xlab = "Delivery Time", ylab = "Cumulative Frequency", ylim = c(0, max(new)))
>
```