IT2120 - Probability and Statistics

Lab Sheet 05

IT24103279

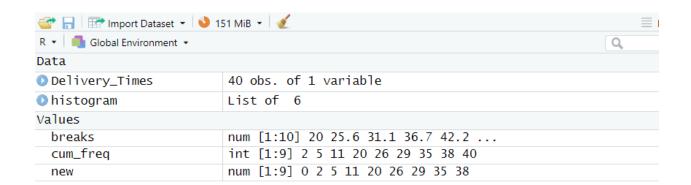
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1. Import the dataset ('Exercise – Lab 05.txt') into R and store it in a data frame called" Delivery Times".

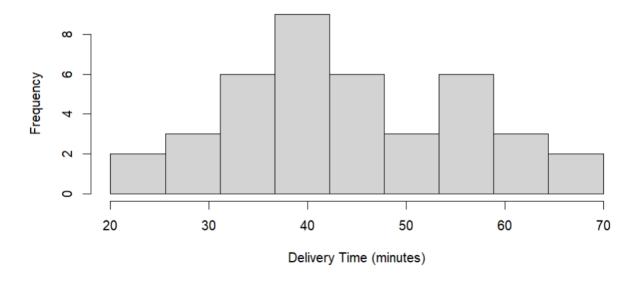
```
setwd("C:\\Users\\Hiruni\\Desktop\\IT24103279")

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

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.



Histogram for Delivery Times



3. Comment on the shape of the distribution.

• The distribution is roughly symmetric with a peak around 40 minutes, but the right side is a little higher than the left.

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

```
> # Combine breaks and cumulative frequencies
> cbind(Upper = breaks, CumFreq = c(new, cum_freq[length(cum_freq)]))
         Upper CumFreq
 [1,] 20.00000
 [2,] 25.55556
                      2
                     5
 [3,] 31.11111
 [4,] 36.66667
                     11
 [5,] 42.22222
                     20
 [6,] 47.77778
                     26
 [7,] 53.33333
                     29
 [8,] 58.88889
                     35
 [9,] 64.44444
                     38
                     40
[10,] 70.00000
```

R 🕶 📑 Global Environment 🕶	
Data	
Delivery_Times	40 obs. of 1 variable
○ histogram	List of 6
Values	
breaks	num [1:10] 20 25.6 31.1 36.7 42.2
cum_freq	int [1:9] 2 5 11 20 26 29 35 38 40
new	num [1:9] 0 2 5 11 20 26 29 35 38

