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IT24103553

IT2120 - Probability and Statistics

Lab Sheet 05

Exercise

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

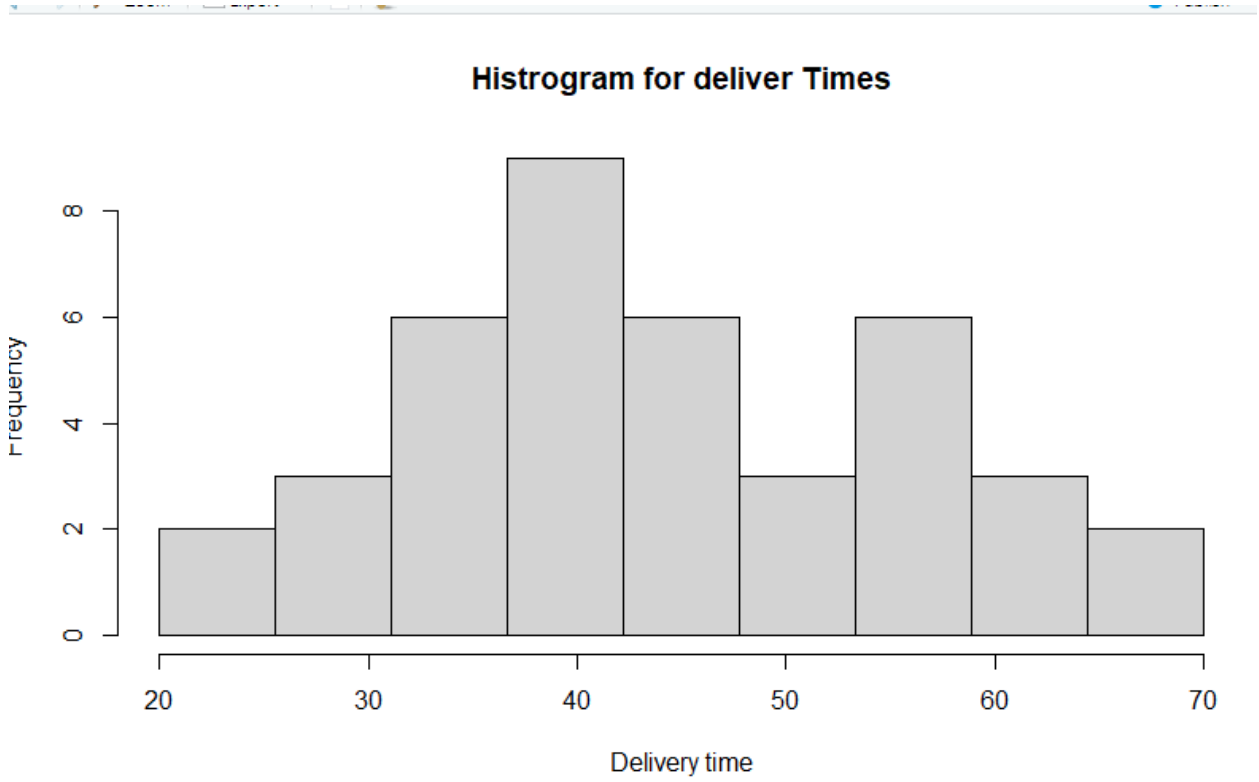
```
setwd("C:\\Users\\IT24103553\\Desktop\\IT42103553")
getwd()
delivery_times <- read.csv("Exercise - Lab 05.txt", header = TRUE,sep=",")
head(delivery_times)

```

```
> delivery_times <- read.csv("Exercise - Lab 05.txt", header = TRUE,sep=",")
> head(delivery_times)
  Delivery_Time_.minutes.
1                      34
2                      54
3                      47
4                      29
5                      39
6                      61
```

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_times$Delivery_Time_.minutes.,main = "Histrogram for deliver Times",breaks =seq(20,70,length =10),right = FALSE,xlab= "Delivery time")
```



3. Comment on the shape of the distribution.

   The distribution is symmetric

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

```r
freq_table <- table(cut(Delivery_Times$Delivery_Time_.minutes.,
                        breaks = seq(20,70,by=5), right = FALSE))
freq_table


cum_freq<-cumsum(freq_table)


mindpoints<-seq(20,65,by=5)+2.5


plot(mindpoints,cum_freq,type="o",col="red",lwd=2,
     xlab="Delivery Time minutes",
     ylab="Cumulative Frequency",
     main="Cumulative Frequency Polygon (ogive)")
grid()
```