SLIIT UNI
THE KNOWLEDGE UNIVERSITY

Faculty of Computing

Year 2 Semester 1 (2025)

IT2120 - Probability and Statistics   Lab Sheet 05

Question 01

Question 02

```
   2
   3   #Question 01
   4   Delivery_Times <- read.table("Exercise - Lab 05.txt", header = TRUE)
   5
   6   fix(Delivery_Times)
   7
   8   names(Delivery_Times)<-c("X1")
   9
  10   attach(Delivery_Times)
  11
  12   #Question 02
  13   histogram<-hist(X1,main="Histogram for Delivery Times (Minutes)",breaks =
  14   |
  15
```

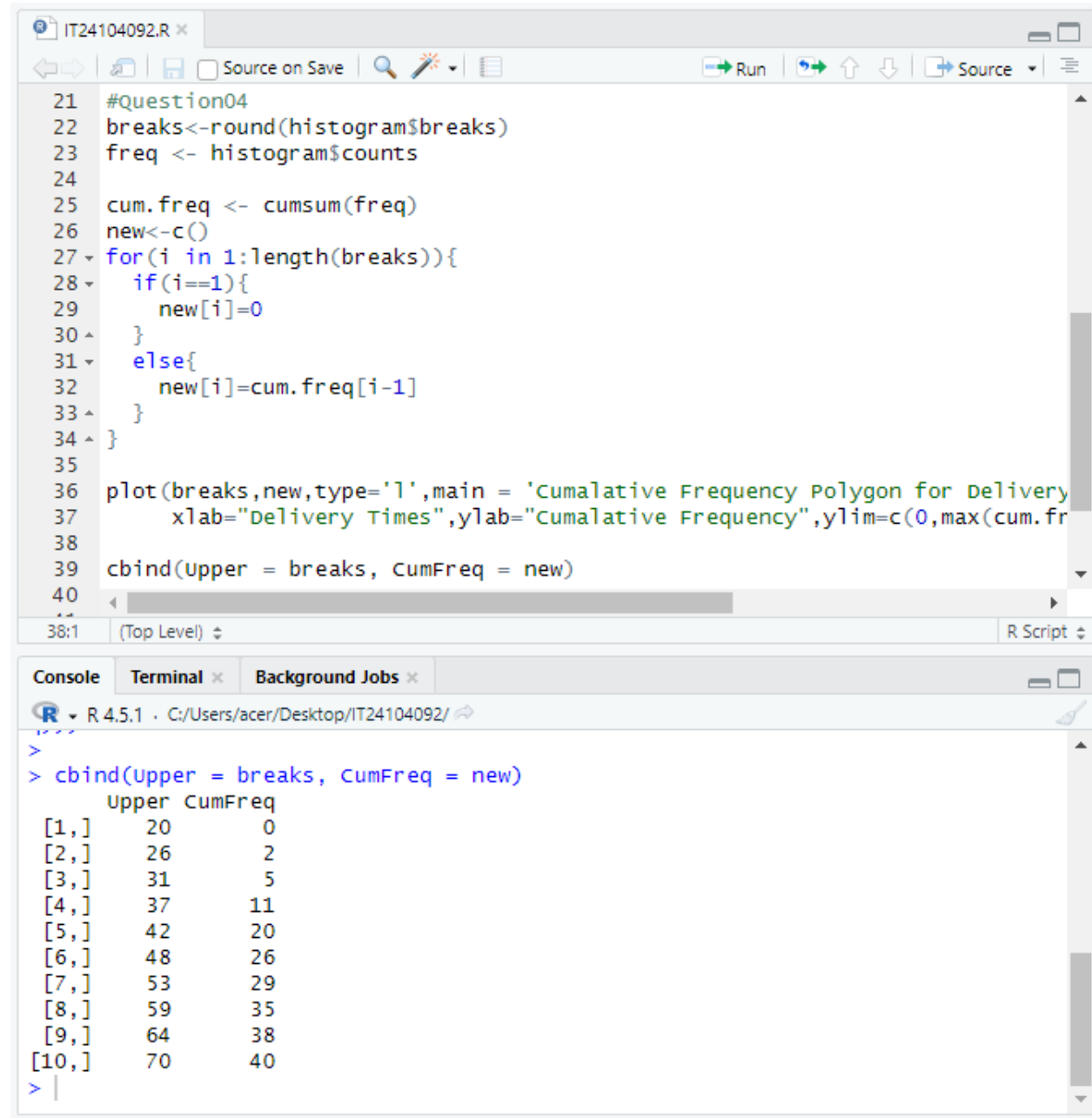14:1   (Top Level)   R Script

Console   Terminal ×   Background Jobs ×

R ▾ R 4.5.1 · C:/Users/acer/Desktop/IT24104092/

```
> #Question 02
> histogram<-hist(X1,main="Histogram for Delivery Times (Minutes)",breaks = seq(2
0,70,length = 10),right = FALSE)
>
```


Histogram for Delivery Times (Minutes)
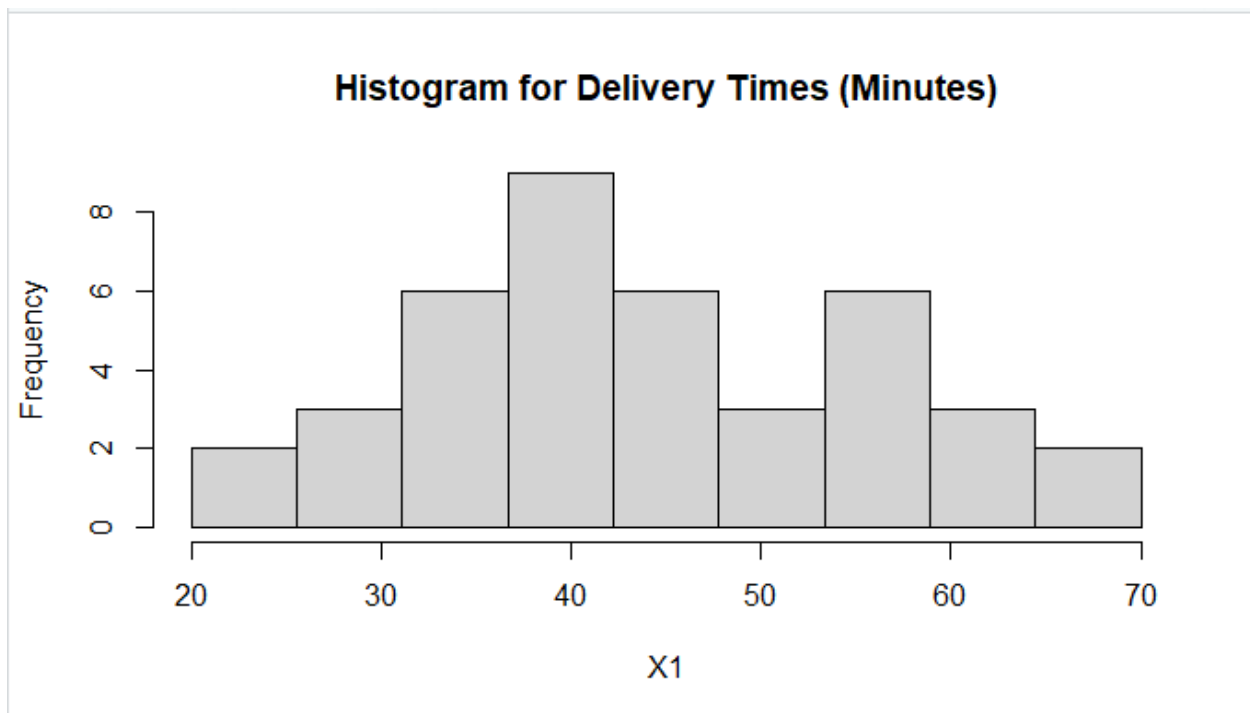
Question 03

```
# ---Question 03---
# The histogram shows that delivery times are approximately symmetric.
# Most delivery times fall between 35 and 45 minutes.
# The shape is bell-shaped, resembling a normal distribution.
# There are fewer observations at both the lower and upper ends.
```

Question 04

IT24104092.R ×

Source on Save   Run   Source ▾

```
21  #Question04
22  breaks<-round(histogram$breaks)
23  freq <- histogram$counts
24
25  cum.freq <- cumsum(freq)
26  new<-c()
27 ▾ for(i in 1:length(breaks)){
28 ▾   if(i==1){
29        new[i]=0
30 ▴   }
31 ▾   else{
32        new[i]=cum.freq[i-1]
33 ▴   }
34 ▴ }
35
36  plot(breaks,new,type='l',main = 'Cumalative Frequency Polygon for Delivery
37        xlab="Delivery Times",ylab="Cumalative Frequency",ylim=c(0,max(cum.fr
38
39  cbind(Upper = breaks, CumFreq = new)
40
```

38:1   (Top Level) ⬍   R Script ⬍

Console   Terminal ×   Background Jobs ×

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```
>
> cbind(Upper = breaks, CumFreq = new)
       Upper CumFreq
 [1,]    20       0
 [2,]    26       2
 [3,]    31       5
 [4,]    37      11
 [5,]    42      20
 [6,]    48      26
 [7,]    53      29
 [8,]    59      35
 [9,]    64      38
[10,]    70      40
> |
```

Cumalative Frequency Polygon for Delivery Times

Cumalative Frequency

Delivery Times