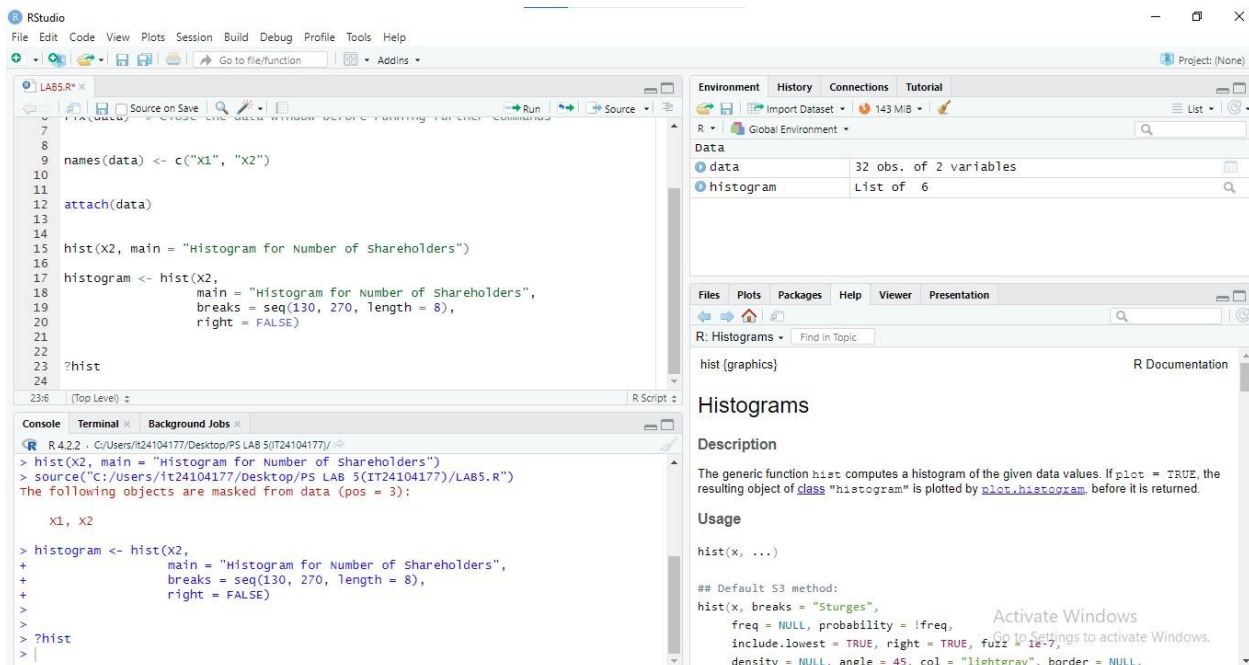
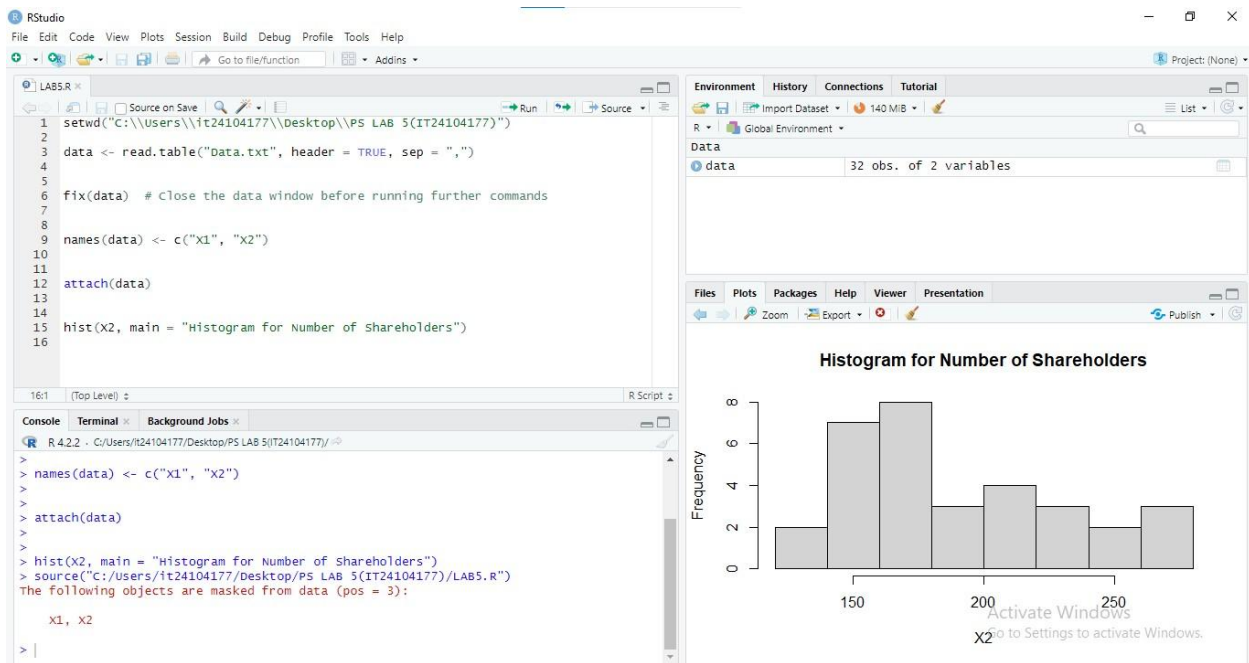


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LAB TIME EXERCISE



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RStudio

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Go to file/function Addins

LABS.R

```
25 breaks <- round(histogram$breaks)
26
27
28 freq <- histogram$counts
29
30
31 mids <- histogram$mids
32
33
34 classes <- c()
35 for (i in 1:(length(breaks) - 1)) {
36   classes[i] <- paste0("[", breaks[i], ",", breaks[i + 1], ")")
37 }
38
39
40 cbind(classes = classes, Frequency = freq)
41
42
```

Environment History Connections Tutorial

Global Environment

histogram List of 6

Values

| | | |
|---------|-----------|---|
| breaks | num [1:8] | 130 150 170 190 210 230 250 270 |
| classes | chr [1:7] | "[130,150)" "[150,170)" "[170,190)" "[190,210)" "[210,230)" "[230,250)" "[250,270)" |
| freq | int [1:7] | 4 9 4 6 3 2 4 |
| i | 7L | |
| mids | num [1:7] | 140 160 180 200 220 240 260 |

Files Plots Packages Help Viewer Presentation

R: Histograms

Histograms

Description

The generic function `hist` computes a histogram of the given data values. If `plot = TRUE`, the resulting object of class "histogram" is plotted by `plot.histogram`, before it is returned.

Usage

```
hist(x, ...)
```

Default S3 method:

```
hist(x, breaks = "Sturges",
     freq = NULL, probability = ifreq,
     include.lowest = TRUE, right = TRUE, fuzz = 1e-7,
     density = NULL, angle = 45, col = "lightgray", border = NULL,
```

RStudio

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Go to file/function Addins

LABS.R

```
35 for (i in 1:(length(breaks) - 1)) {
36   classes[i] <- paste0("[", breaks[i], ",", breaks[i + 1], ")")
37 }
38
39
40 cbind(classes = classes, Frequency = freq)
41
42
43 lines(mids, freq)
44
45
46 plot(mids, freq,
47      type = 'l',
48      main = "Frequency Polygon for Shareholders",
49      xlab = "Shareholders",
50      ylab = "Frequency",
51      ylim = c(0, max(freq)))
52
```

Environment History Connections Tutorial

Global Environment

histogram List of 6

Values

| | | |
|---------|-----------|---|
| breaks | num [1:8] | 130 150 170 190 210 230 250 270 |
| classes | chr [1:7] | "[130,150)" "[150,170)" "[170,190)" "[190,210)" "[210,230)" "[230,250)" "[250,270)" |
| freq | int [1:7] | 4 9 4 6 3 2 4 |
| i | 7L | |
| mids | num [1:7] | 140 160 180 200 220 240 260 |

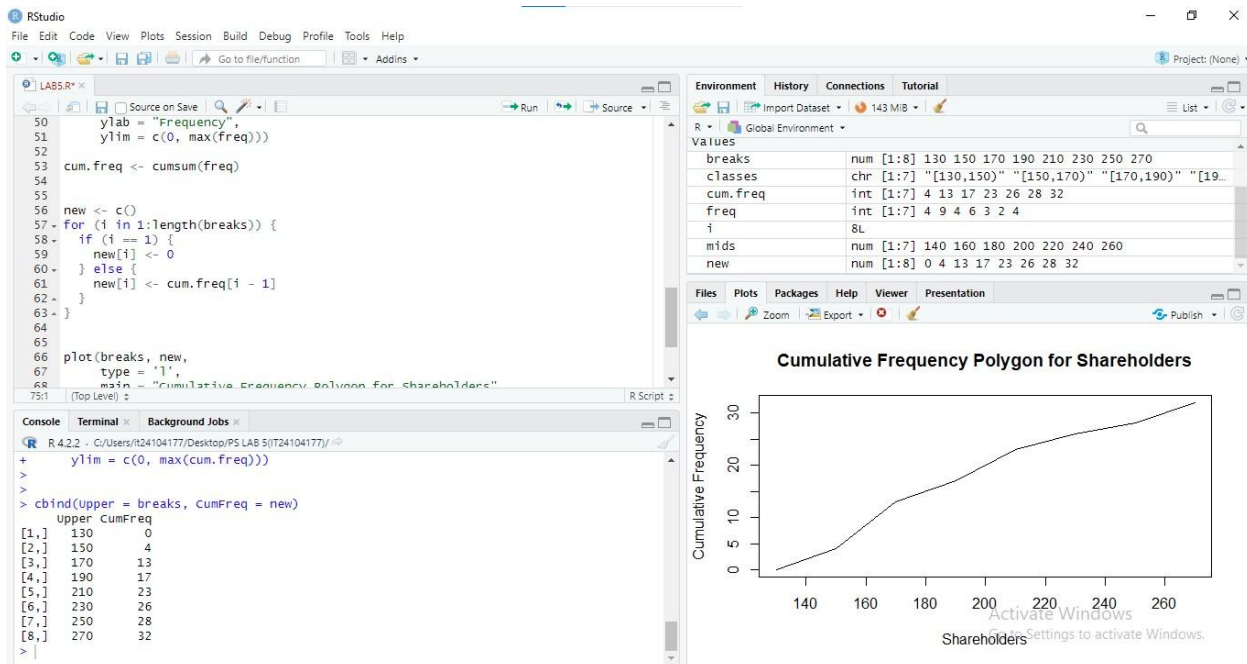
Files Plots Packages Help Viewer Presentation

Zoom Export

Frequency Polygon for Shareholders

Frequency

Shareholders

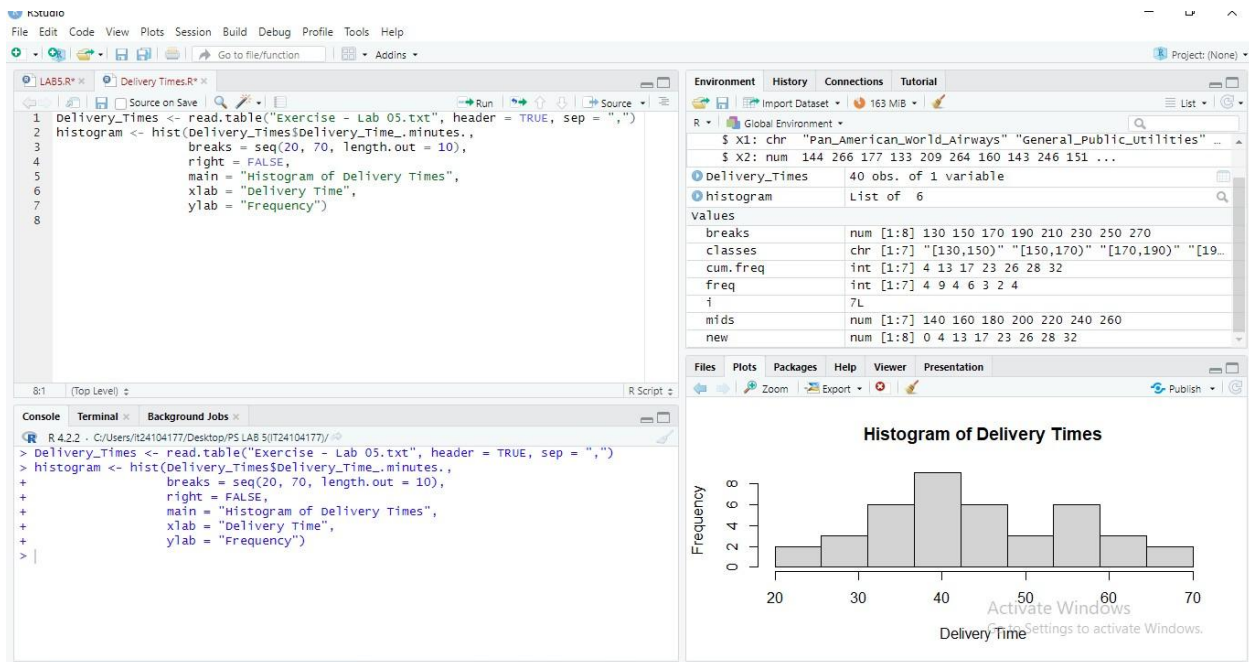


LAB TIME EXERSICE

Q1/Q2) Import the dataset/

Draw a histogram with 9 class intervals (20– 70), right-open.

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Q4) Draw a cumulative frequency polygon

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains the R script for creating a cumulative frequency polygon.
- Environment:** Displays the data structure and values of the variables.
- Console:** Shows the execution of the R script.

R Script:

```

1 histogram <- hist(Delivery_Times$Delivery_Time..minutes.,
2                   breaks = seq(20, 70, length.out = 10),
3                   right = FALSE,
4                   main = "Histogram of Delivery Times",
5                   xlab = "Delivery Time",
6                   ylab = "Frequency")
7
8 breaks <- round(histogram$breaks)
9 freq <- histogram$counts
10 cum.freq <- cumsum(freq)
11 ogive_points <- c(0, cum.freq)
12
13 plot(breaks, ogive_points,
14      type = "l",
15      main = "Cumulative Frequency Polygon (ogive)",
16      xlab = "Delivery Time",
17      ylab = "Cumulative Frequency",
18      ylim = c(0, max(cum.freq)))
19

```

Environment:

| Variable | Class | Length |
|----------------|------------|------------------------|
| data | data.frame | 32 obs. of 2 variables |
| Delivery_Times | numeric | 40 obs. of 1 variable |
| histogram | hist | List of 6 |

Values:

| Variable | Values |
|--------------|---|
| breaks | num [1:10] 20 26 31 37 42 48 53 59 64 70 |
| classes | chr [1:7] "[130,150)" "[150,170)" "[170,190)" "[190,210)" "[210,230)" "[230,250)" "[250,270)" |
| cum.freq | int [1:9] 2 5 11 20 26 29 35 38 40 |
| freq | int [1:9] 2 3 6 9 6 3 6 3 2 |
| f | 8L |
| mids | num [1:7] 140 160 180 200 220 240 260 |
| new | num [1:8] 0 4 13 17 23 26 28 32 |
| ogive_points | num [1:10] 0 2 5 11 20 26 29 35 38 40 |

Console:

```

R 4.2.2 - C:/Users/it24104177/Desktop/PS LAB 5/IT24104177/
> breaks <- round(histogram$breaks)
> freq <- histogram$counts
> cum.freq <- cumsum(freq)
> ogive_points <- c(0, cum.freq)
>
> plot(breaks, ogive_points,
+      type = "l",
+      main = "Cumulative Frequency Polygon (ogive)",
+      xlab = "Delivery Time",
+      ylab = "Cumulative Frequency",
+      ylim = c(0, max(cum.freq)))
>

```