LAB 05 - PS

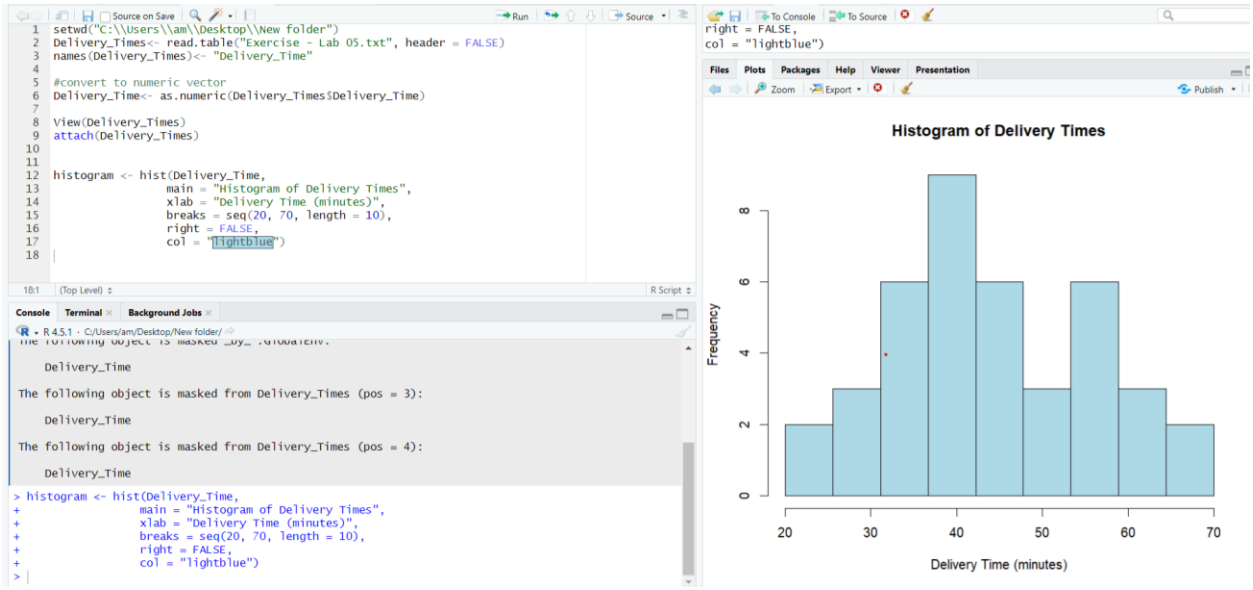
01)

```
setwd("C:\\Users\\am\\Desktop\\New folder")
Delivery_Times<- read.table("Exercise - Lab 05.txt", header = FALSE)
names(Delivery_Times)<- "Delivery_Time"

View(Delivery_Times)
attach(Delivery_Times)
```

```
> setwd("C:\\Users\\am\\Desktop\\New folder")
> Delivery_Times<- read.table("Exercise - Lab 05.txt", header = FALSE)
> names(Delivery_Times)<- "Delivery_Time"
>
> View(Delivery_Times)
> attach(Delivery_Times)
>
```

02)



03)

```
19
20 #The distribution appears to be approximately symmetric with a slight right skew.
21 #Most delivery times are clustered around 35-55 minutes, with fewer very short
22 #20-30 minutes and very long 60-70 delivery times.
23
24
```

23:1 (Top Level) R Script

Console Terminal Background Jobs

R 4.5.1 · C:/Users/am/Desktop/New folder/

```
>
>
>
> #The distribution appears to be approximately symmetric with a slight right skew.
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> #20-30 minutes and very long 60-70 delivery times.
```

04)

```
42
43 # Display cumulative frequency table
44 cbind(Upper_Limit = breaks, Cumulative_Frequency = new)
45
```

45:1 (Top Level)

Console Terminal Background Jobs

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```
> # Display cumulative frequency table
> cbind(Upper_Limit = breaks, Cumulative_Frequency = new)
      Upper_Limit Cumulative_Frequency
 [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
```

```
cum.freq <- cumsum(freq)
cumulative_data <- c(0, cum.freq)

# FIXED: Use 'l' (lowercase L) for lines, not '1' (number one)
plot(breaks, cumulative_data,
     type = "l",  # CORRECT: lowercase 'l' for lines, not number
     main = "Cumulative Frequency Polygon (Ogive) for Delivery T
     xlab = "Delivery Time (minutes)",
     ylab = "Cumulative Frequency",
     col = "red",
     lwd = 2,
     ylim = c(0, max(cumulative_data) + 5))

# Add points to make it clearer
points(breaks, cumulative_data, pch = 16, col = "blue", cex = 1.

# Add grid for better readability
```

```
> # 4. Draw cumulative frequency polygon (ogive) in separate plot
> windows()
> # Get class information from histogram
> breaks <- round(histogram$breaks)
> freq <- histogram$counts
> # Calculate cumulative frequencies
> cum.freq <- cumsum(freq)
> cumulative_data <- c(0, cum.freq)
> # FIXED: Use 'l' (lowercase L) for lines, not '1' (number one)
> plot(breaks, cumulative_data,
+      type = "l",  # CORRECT: lowercase 'l' for lines, not number '1'
+      main = "Cumulative Frequency Polygon (Ogive) for Delivery Time
s",
+      xlab = "Delivery Time (minutes)",
+      ylab = "Cumulative Frequency",
+      col = "red",
+      lwd = 2,
+      ylim = c(0, max(cumulative_data) + 5))
```