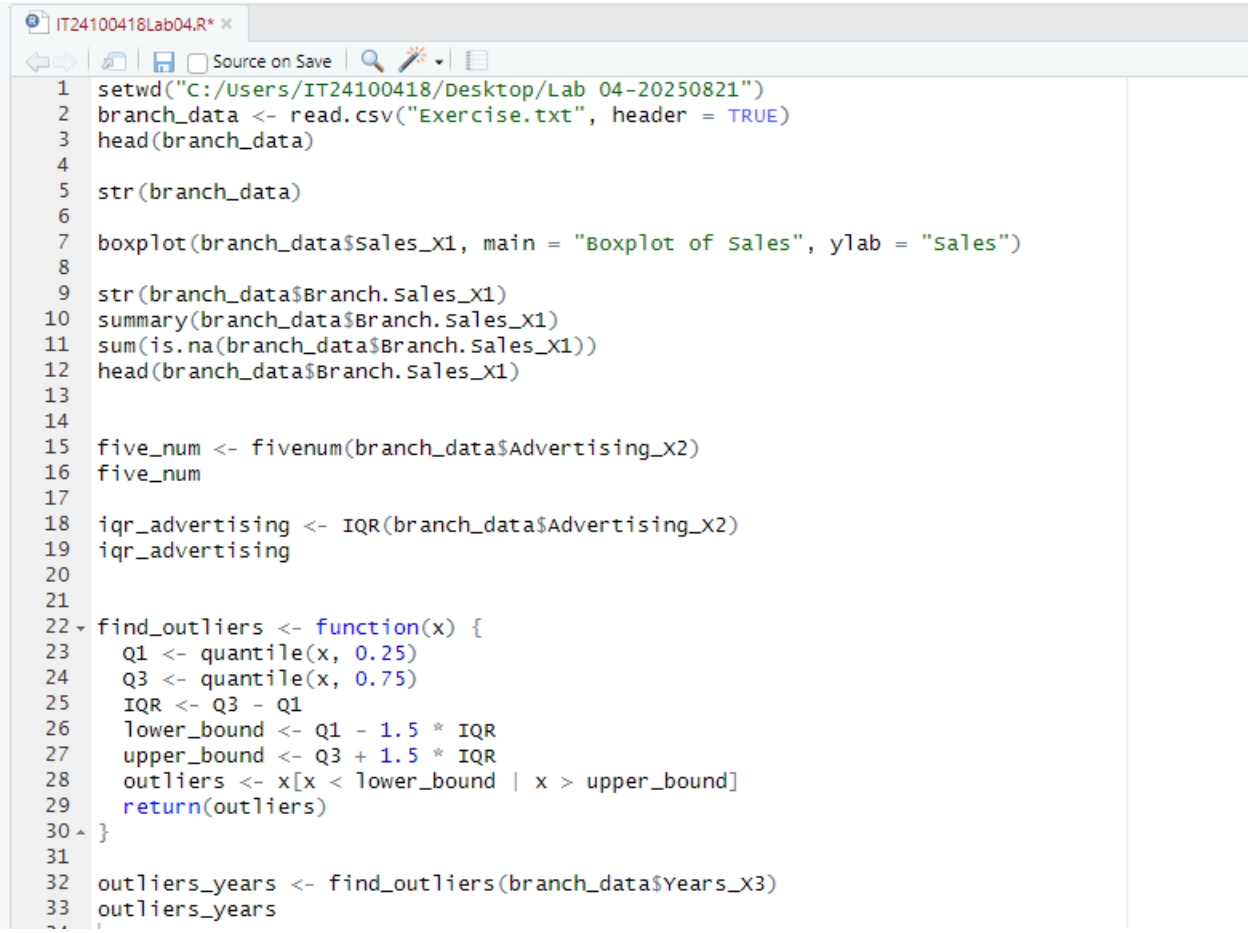
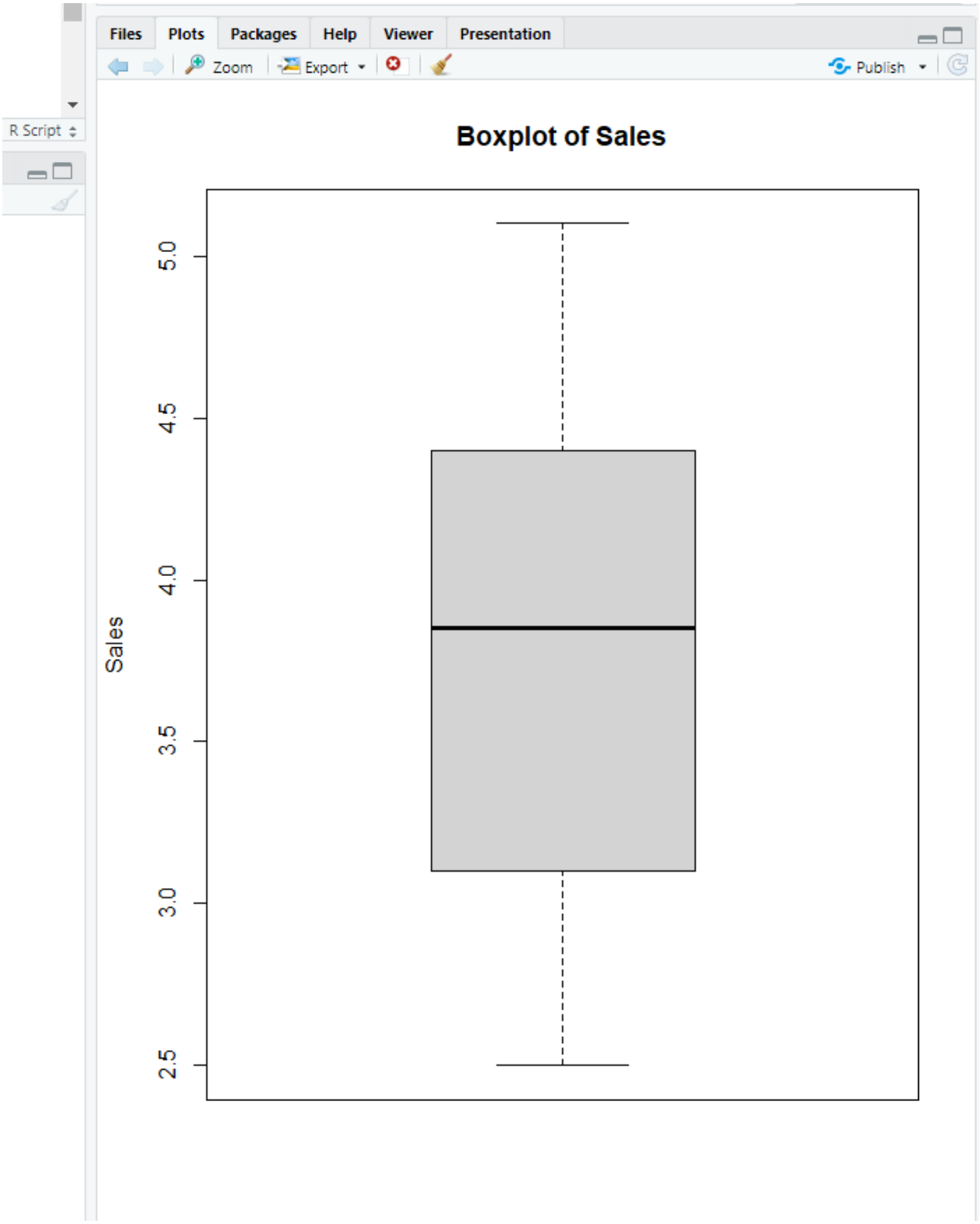
LAB 04

IT24100418



```
> setwd("C:/Users/IT24100418/Desktop/Lab 04-20250821")
> branch_data <- read.csv("Exercise.txt", header = TRUE)
> head(branch_data)
  Branch Sales_X1 Advertising_X2 Years_X3
1      1      3.4            120        4
2      2      4.1            150        7
3      3      2.8             90        3
4      4      5.0            200       10
5      5      3.7            110        5
6      6      4.5            175        6
> str(branch_data)
'data.frame':   30 obs. of  4 variables:
 $ Branch        : int  1 2 3 4 5 6 7 8 9 10 ...
 $ Sales_X1      : num  3.4 4.1 2.8 5 3.7 4.5 3 4.9 3.2 2.5 ...
 $ Advertising_X2: int  120 150 90 200 110 175 95 185 105 80 ...
 $ Years_X3      : int  4 7 3 10 5 6 2 9 4 1 ...
> boxplot(branch_data$Sales_X1, main = "Boxplot of Sales", ylab = "Sales")
> str(branch_data$Branch.Sales_X1)
 NULL
> summary(branch_data$Branch.Sales_X1)
Length  Class   Mode
     0   NULL   NULL
> sum(is.na(branch_data$Branch.Sales_X1))
[1] 0
> head(branch_data$Branch.Sales_X1)
NULL
> five_num <- fivenum(branch_data$Advertising_X2)
> five_num
[1]  80.0 100.0 132.5 160.0 210.0
> iqr_advertising <- IQR(branch_data$Advertising_X2)
> iqr_advertising
[1] 57.5
> find_outliers <- function(x) {
+   Q1 <- quantile(x, 0.25)
+   Q3 <- quantile(x, 0.75)
+   IQR <- Q3 - Q1
+   lower_bound <- Q1 - 1.5 * IQR
+   upper_bound <- Q3 + 1.5 * IQR
+   outliers <- x[x < lower_bound | x > upper_bound]
+   return(outliers)
+ }
> outliers_years <- find_outliers(branch_data$Years_X3)
> outliers_years
integer(0)
```


Files
Plots
Packages
Help
Viewer
Presentation
Zoom
Export
Publish
R Script
Boxplot of Sales
Sales
5.0
4.5
4.0
3.5
3.0
2.5