

EXERCISE

```
IT23286146.R x
Source on Save
1 setwd("C:\\Users\\it23286146\\Desktop\\IT23286146")
2 getwd()
3
4 branch_data <- read.table("Exercise.txt", header = TRUE, sep = ",")
5 head(branch_data)
6
7 str(branch_data)
8
9 boxplot(branch_data$Sales_X1, main = "Boxplot of Sales", ylab = "Sales")
10
11 fivenum(branch_data$Advertising_X2)
12 IQR(branch_data$Advertising_X2)
13
14 find_outliers <- function(x) {
15   Q1 <- quantile(x, 0.25)
16   Q3 <- quantile(x, 0.75)
17   IQR <- Q3 - Q1
18   lower_bound <- Q1 - 1.5 * IQR
19   upper_bound <- Q3 + 1.5 * IQR
20   return(x[x < lower_bound | x > upper_bound])
21 }
22
23 find_outliers(branch_data$Years_X3)
24
```

```

Console Terminal × Background Jobs ×
R 4.2.2 · C:/Users/it23286146/Desktop/IT23286146/ ↗
> branch_data <- read.table("Exercise.txt", header = TRUE, sep = ",")
> 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$Sales_X1, main = "Boxplot of Sales", ylab = "sales")
>
> fivenum(branch_data$Advertising_X2)
[1]  80.0 100.0 132.5 160.0 210.0
> IQR(branch_data$Advertising_X2)
[1] 57.5
>
> find_outliers <- function(x) {
+   Q1 <- quantile(x, 0.25)
+   Q3 <- quantile(x, 0.75)
+   IQR <- Q3 - Q1
+   lower_bound <- Q1 - 1.5 * IQR
+   upper_bound <- Q3 + 1.5 * IQR
+   return(x[x < lower_bound | x > upper_bound])
+ }
>
> find_outliers(branch_data$Years_X3)
integer(0)

```

