IT2120 - Probability and Statistics

Lab 4

IT24102536

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Exercise

Untitled1*

Source on Save

```r
#Exercise

setwd("C:/Users/IT24102536/Desktop/IT24102536")
# 1.import dataset
branch_data <-read.table("Exercise.txt",header=TRUE,sep = ",")
fix(branch_data)
attach(branch_data)

#2. Indentify variables
#Branch          ---   Categoricl(Nominal)
#Sales_X1        ---   Numeric (Ratio scale)
#Advertising_X2  ---   Numeric (Ratio scale)
#years_X3        ---   Numeric (Ratio scale)

#3.Boxplot for sales and interpretation
boxplot(branch_data$sales_X1, main="Boxplot for sales",outline = TRUE,outpch=8,horizontal=TRUE)
```

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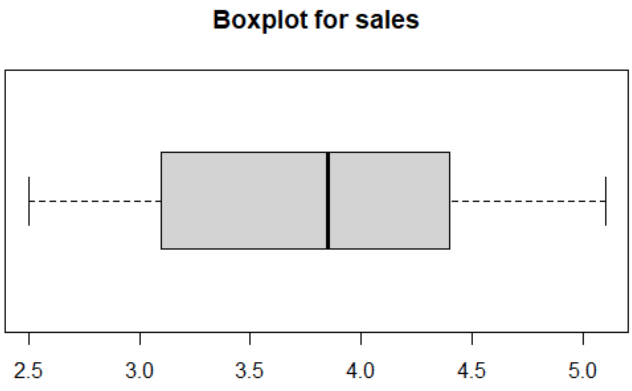

```r
#4.five number summary and IQR for Advertising variables
summary(branch_data$Advertising_X2)
fivenum(branch_data$Advertising_X2)
IQR(branch_data$Advertising)
```

```
> summary(branch_data$Advertising_X2)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   80.0   101.2   132.5   134.8   158.8   210.0
> fivenum(branch_data$Advertising_X2)
[1]  80.0 100.0 132.5 160.0 210.0
> IQR(branch_data$Advertising)
[1] 57.5
>
```

```
> #5.Check for outliners in years variables
> find_outliers <- function(x){
+   Q1<- quantile(x,0.25)
+   Q3<- quantile(x,0.75)
+   IQR_val <-Q3 -Q1
+
+   lower <-Q1 - 1.5 * IQR_val
+   upper <-Q3 + 1.5 * IQR_val
+
+   outliers <-x[x < lower|x > upper]
+   return(outliers)
+ }
> find_outliers(branch_data$Years_X3)
numeric(0)
>
```