Probability And Statistics

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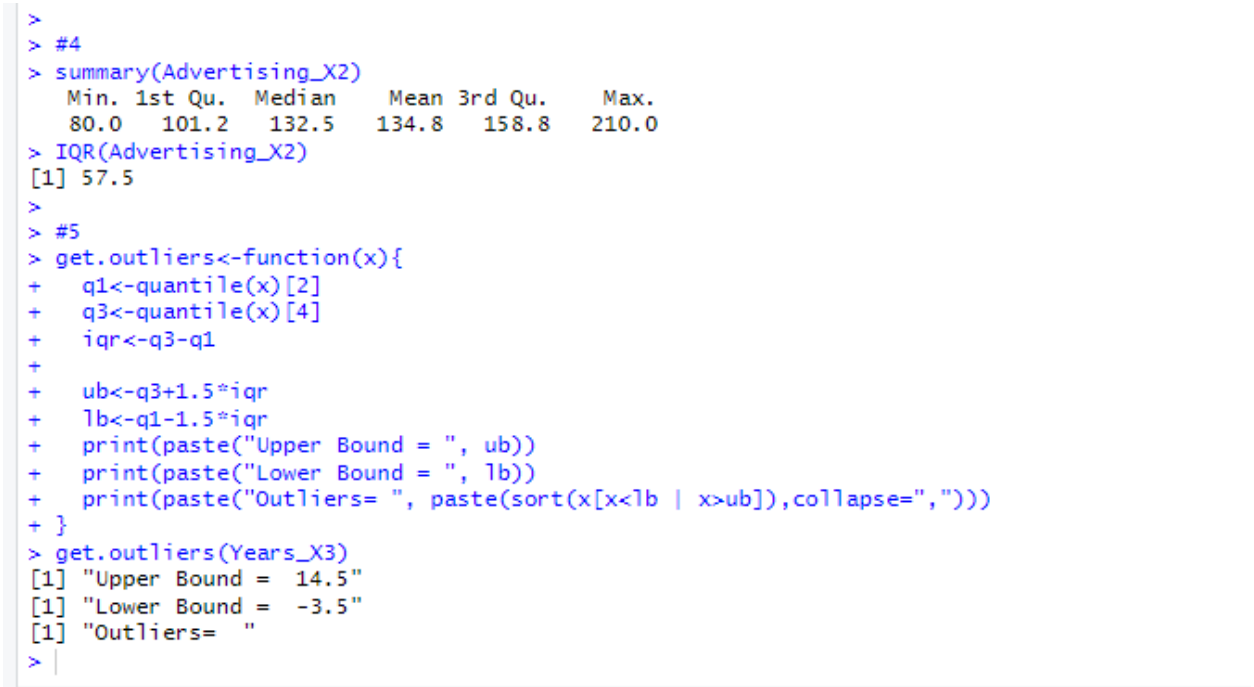
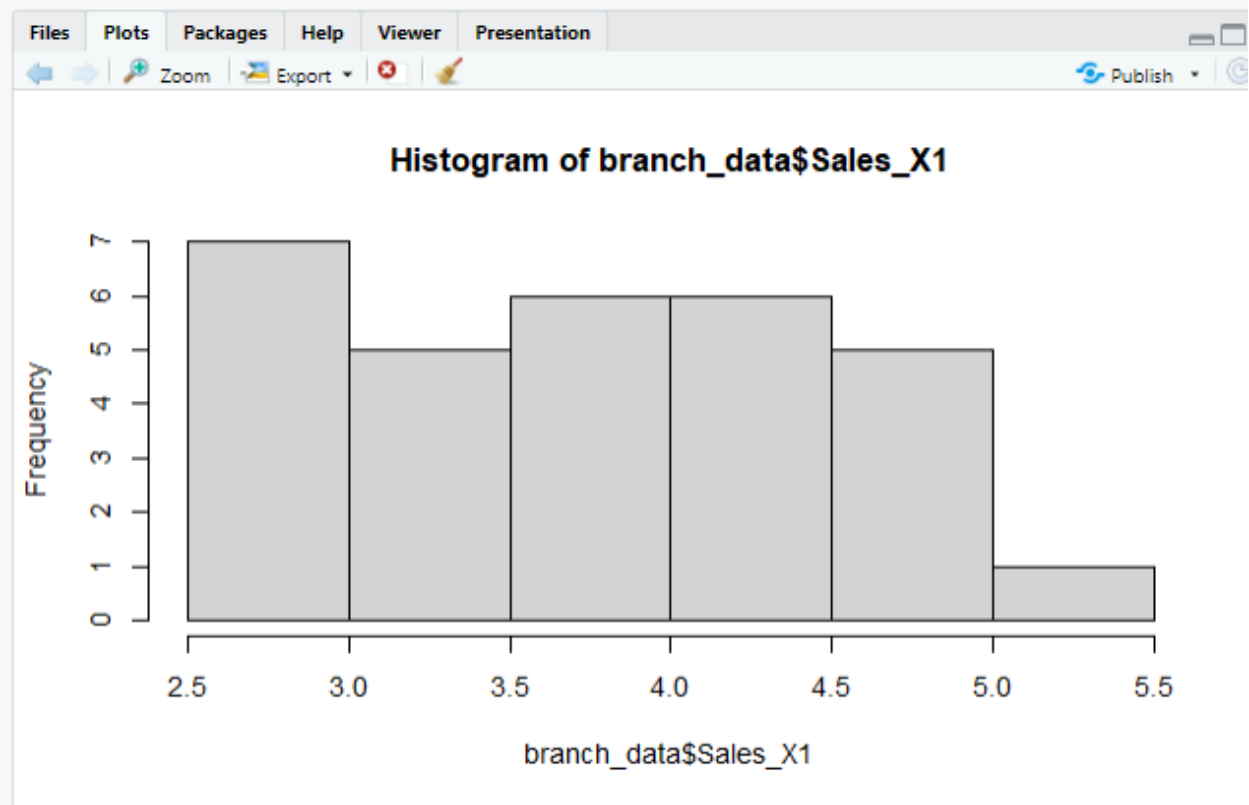
IT24102372

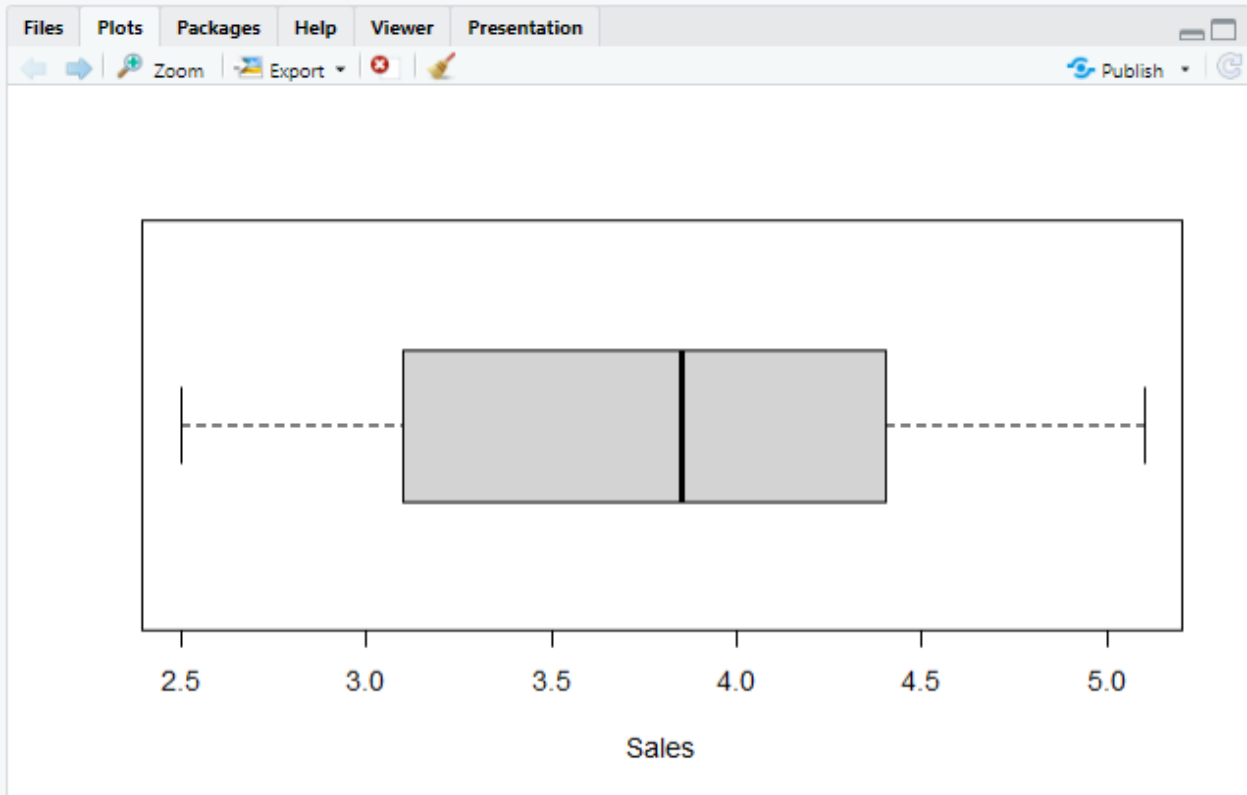
LAB-04

```
> ## Part 1: Setup
> setwd("C:\\Users\\Hp\\Desktop\\SLIIT\\Y2 SEM 1\\PS\\IT24102372_lab4")
> getwd()
[1] "C:/Users/Hp/Desktop/SLIIT/Y2 SEM 1/PS/IT24102372_lab4"
> ## Exercise
>
> #1
> branch_data<-read.table("Exercise.txt",header=TRUE, sep=",")
>
> #2
> attach(branch_data)
> for(col in names(branch_data)){
+   print(paste(col, " : ", class(branch_data[[col]])))
+ }
[1] "Branch  :  integer"
[1] "Sales_X1  :  numeric"
[1] "Advertising_X2  :  integer"
[1] "Years_X3  :  integer"
> #Branch: Nominal
> #Sales: Nominal/Ratio
> #Advertising: Nominal/Ratio
> #Years:Nominal/Ratio
>
> #3
> boxplot(branch_data$Sales_X1, Main="Sales", outline=TRUE, outpch=8, horizontal=TRUE,
+         xlab="Sales")
>
> hist(branch_data$Sales_X1, Main="Sales", outline=TRUE, outpch=8, horizontal=TRUE,)
```



```
>
> #4
> summary(Advertising_X2)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   80.0   101.2   132.5   134.8   158.8   210.0
> IQR(Advertising_X2)
[1] 57.5
>
> #5
> get.outliers<-function(x){
+   q1<-quantile(x)[2]
+   q3<-quantile(x)[4]
+   iqr<-q3-q1
+
+   ub<-q3+1.5*iqr
+   lb<-q1-1.5*iqr
+   print(paste("Upper Bound = ", ub))
+   print(paste("Lower Bound = ", lb))
+   print(paste("Outliers= ", paste(sort(x[x<lb | x>ub]),collapse=",")))
+ }
> get.outliers(Years_X3)
[1] "Upper Bound =  14.5"
[1] "Lower Bound =  -3.5"
[1] "Outliers=  "
>
```


Files
Plots
Packages
Help
Viewer
Presentation
Zoom
Export
Publish
Histogram of branch_data$Sales_X1
Frequency
0
1
2
3
4
5
6
7
2.5
3.0
3.5
4.0
4.5
5.0
5.5
branch_data$Sales_X1


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