

R Notebook

1 - Calling ISLR library and printing the summary of Carseats dataset

```
library(ISLR)
s<-Carseats#assigning the Carseats dataset to a variable
print(summary(s))
```

```
##      Sales      CompPrice      Income      Advertising
##  Min.   : 0.000   Min.   : 77   Min.   : 21.00   Min.   : 0.000
## 1st Qu.: 5.390   1st Qu.:115   1st Qu.: 42.75   1st Qu.: 0.000
## Median : 7.490   Median :125   Median : 69.00   Median : 5.000
## Mean   : 7.496   Mean   :125   Mean   : 68.66   Mean   : 6.635
## 3rd Qu.: 9.320   3rd Qu.:135   3rd Qu.: 91.00   3rd Qu.:12.000
## Max.   :16.270   Max.   :175   Max.   :120.00   Max.   :29.000
##      Population      Price      ShelveLoc      Age      Education
##  Min.   : 10.0   Min.   : 24.0   Bad   : 96   Min.   :25.00   Min.   :10.0
## 1st Qu.:139.0   1st Qu.:100.0   Good  : 85   1st Qu.:39.75   1st Qu.:12.0
## Median :272.0   Median :117.0   Medium:219   Median :54.50   Median :14.0
## Mean   :264.8   Mean   :115.8               Mean   :53.32   Mean   :13.9
## 3rd Qu.:398.5   3rd Qu.:131.0               3rd Qu.:66.00   3rd Qu.:16.0
## Max.   :509.0   Max.   :191.0               Max.   :80.00   Max.   :18.0
## Urban      US
## No :118   No :142
## Yes:282   Yes:258
##
##
##
##
```

2 - Printing the number of rows in the dataset

```
print(paste("Number of rows in the dataset are:",nrow(s)))
```

```
## [1] "Number of rows in the dataset are: 400"
```

```
print(paste("Maximum value of Advertising is:", max(s$Advertising)))#calculating the maximum value of t
```

```
## [1] "Maximum value of Advertising is: 29"
```

3 - Calculating Interquartile Range (IQR)

```
print(paste("The Inter Quartile Range of Price is:", IQR(s$Price)))
```

```
## [1] "The Inter Quartile Range of Price is: 31"
```

4 - Plotting Price vs Sales

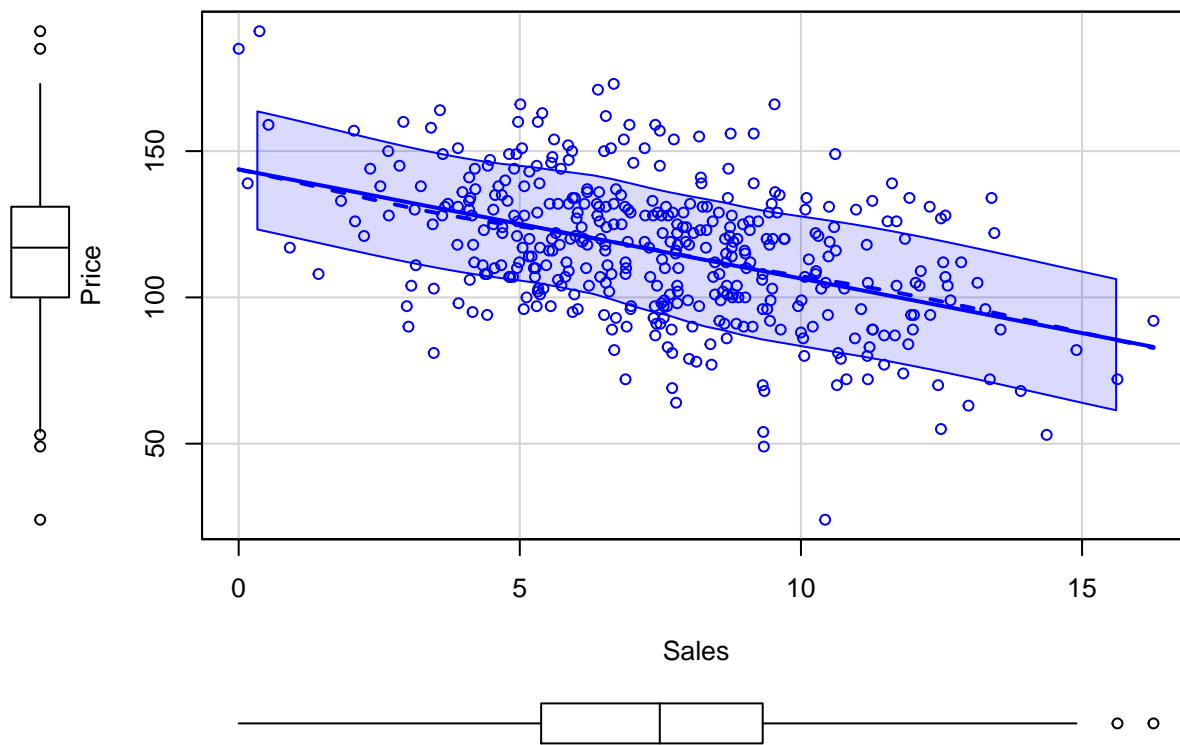
```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse 1.3.2 --
## v ggplot2 3.3.6      v purrr  0.3.4
## v tibble  3.1.8      v dplyr  1.0.10
## v tidyr   1.2.1      v stringr 1.4.1
## v readr   2.1.3      v forcats 0.5.2
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
```

```
library(car)
```

```
## Loading required package: carData
##
## Attaching package: 'car'
##
## The following object is masked from 'package:dplyr':
##
##     recode
##
## The following object is masked from 'package:purrr':
##
##     some
```

```
scatterplot(Price ~ Sales, data=s)
```



```
cor(s$Price,s$Sales,method='pearson')#calculating the correaltion between Price and Sales
```

```
## [1] -0.4449507
```

Here, from the plot we notice that, as the Price of the Carseats are increasing the sales are decreasing. From the above we calculated the correlation of Price and Sales of the Carseats. We notice that the correlation between the two is a negative linear correlation.