64036_Assignment1

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```
library("knitr")
```

Summary of the Carseats dataset:

```
library(ISLR)
summary(Carseats)
```

```
##      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
##
##
##
##
```

Number of (observations)rows in Carseats dataset:

```
number_rows <- nrow(Carseats)
print(number_rows)
```

```
## [1] 400
```

We get 400 observations in a Carseats dataset

Maximum value of the advertising attribute:

```
Advertising_Max <-max(Carseats$Advertising)
print(Advertising_Max)
```

```
## [1] 29
```

Calculating the inter quartile of price attribute:

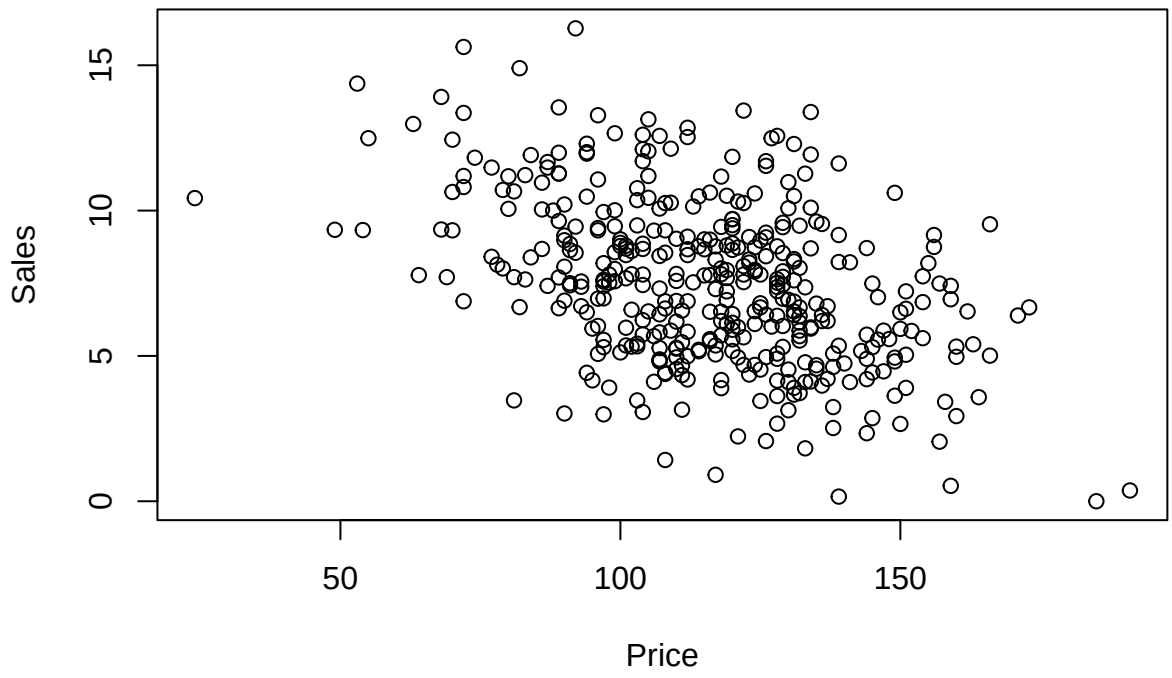
```
iqr_price <-IQR(Carseats$Price)
print(iqr_price)
```

```
## [1] 31
```

The value of IQR is 31

Plotting of Price against Sales:

```
plot_SP<- plot(Carseats$Price,
Carseats$Sales,
xlab="Price",
ylab="Sales")
```




```
print(plot_SP)
```

```
## NULL
```

Correlation of Price and Sales:

```
cor_cooeft <- cor(Carseats$Price, Carseats$Sales)
print(cor_cooeft)
```

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

As the value is -0.4449 i.e the relation between Price and Sales is negative which indicates Weak relation