

# Business Analytics- Assignment 1

```
#ISLR package has already been installed using install.packages("ISLR")  
#Calling the ISLR Library  
library(ISLR)
```

```
#Printing the summary of carseats data  
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  
##  
##  
##  
##
```

```
#Finding the number of observations (rows) in the dataset  
nrow(Carseats)
```

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

```
#Finding the maximum value of the advertising attribute  
max(Carseats$Advertising)
```

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

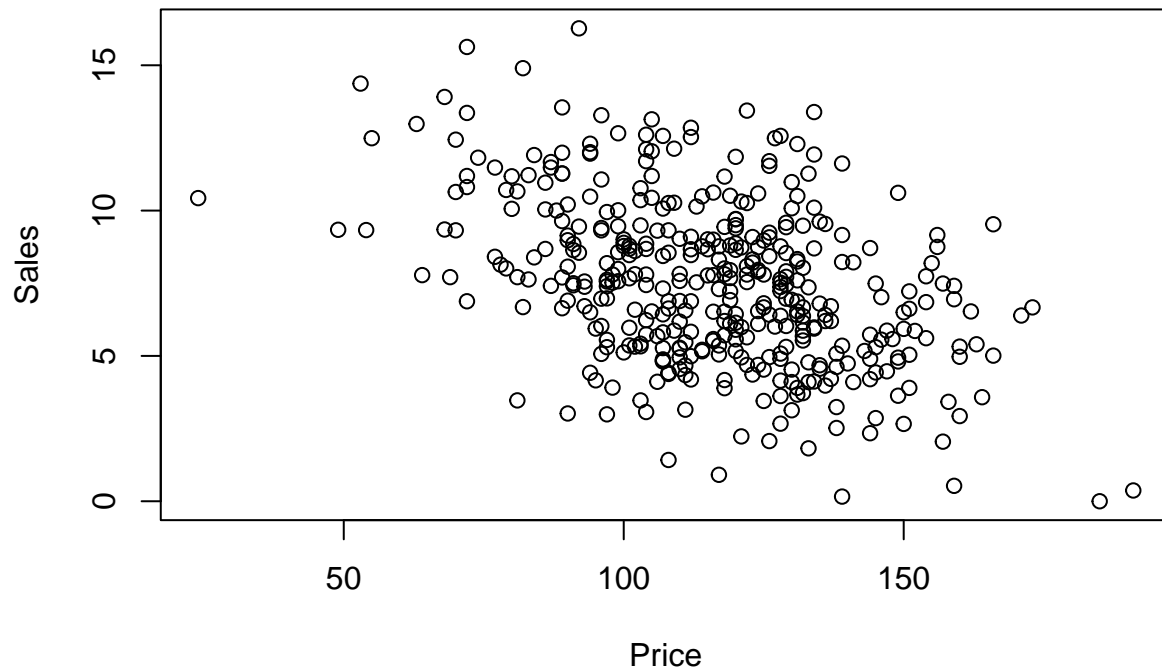
```
#Calculating Interquartile Range of the price attribute  
IQR(Carseats$Price)
```

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

```
#Plotting Sales against Price
```

```
plot(Carseats$Price, Carseats$Sales, main = "Sales against Price plot ", xlab = "Price", ylab = "Sales")
```

## Sales against Price plot



*#Observations - The two variables  $x=Price$  and  $y=Sales$  have a negative association because it is noticed*

```
#Calculating the correlation of two attributes (Sales and Price)  
cor(Carseats$Sales, Carseats$Price)
```

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

*#Observations - We have considered the correlation between sales and price where the correlation value*