Assignment 1

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Question 1

```
#Installing the ISLR package
#install.packages("ISLR")
library(ISLR)  #Loading the ISLR package
```

Question 2

```
#Descriptive Statistics of Carseats
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
##
##
##
##
```

```
numofrows= nrow(Carseats)
#Number of rows:
print(paste("Number of rows/observations:", numofrows))
```

```
## [1] "Number of rows/observations: 400"
```

Question 3

```
#Maximum value of Advertising attribute
maxvalueofadv= max(Carseats$Advertising)
print(paste("Maximum value of Advertising is", maxvalueofadv))
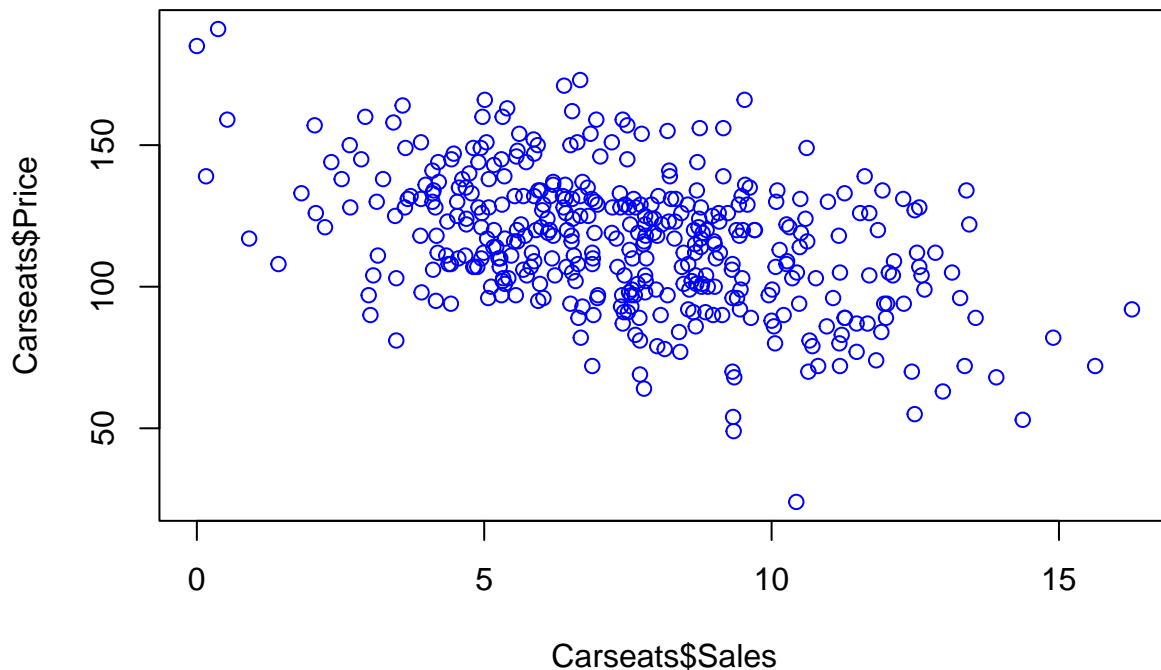```

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

Question 4

```
#IQR value of Price attribute
priceIQR=IQR(Carseats$Price)

print(paste("IQR value of Price is", priceIQR))
```

[1] "IQR value of Price is 31"

Question 5

```
#Scatter plot between sales and price attribute
plot(Carseats$Sales,Carseats$Price,col="blue")
```



```
#calculating the correlation between sales and price attributes
Corvalue = cor(Carseats$Sales,Carseats$Price, method=c("pearson", "kendall", "spearman"))

print(paste("Correlation value pf Sales and Price is", Corvalue))
```

```
## [1] "Correlation value pf Sales and Price is -0.444950727846573"
```

From the plot we see that Sales and Price are inversely proportional. Here the correlation shows negative sign which means as the Sales increases price decreases.