Assignment 1

Nikitha Chigurupati

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#1. Installed the ISLR Library using the command install.packages(ISLR)

#2.Calling the ISLR Library, Summary of Carseats and Finding the number of rows.

```
library(ISLR)
```

```
## Warning: package 'ISLR' was built under R version 4.1.3
```

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

```
nrow(Carseats)
```

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

#3.Finding the Maximum Value of Advertising attribute.

```
max(Carseats$Advertising)
```

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

#4.Finding the IQR Value of Price attribute.

```
IQR(Carseats$Price)
```

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

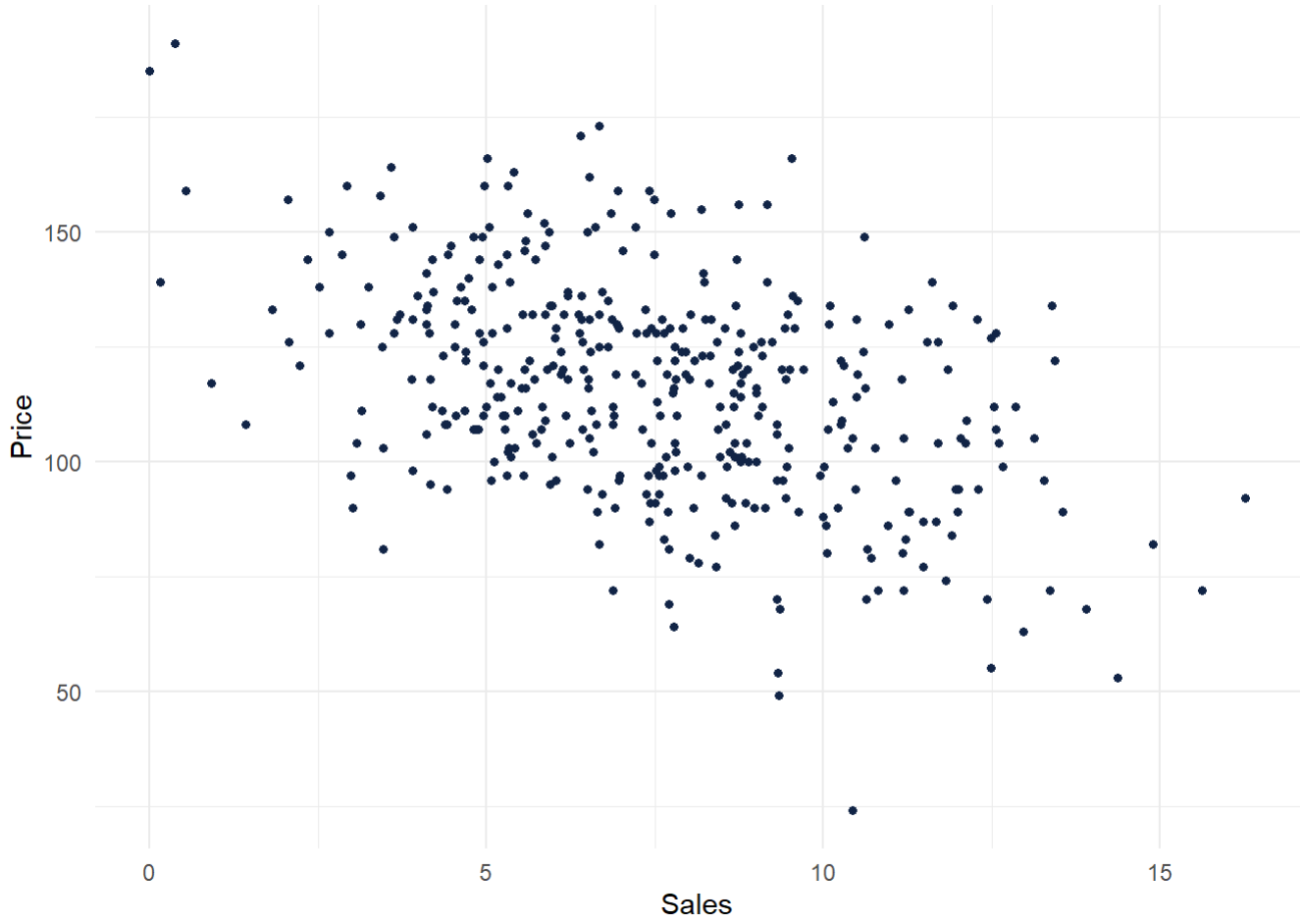
#5. Plotting the Sales over Price and finding the correlation.

```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 4.1.3
```

```
## Warning: replacing previous import 'lifecycle::last_warnings' by
## 'rlang::last_warnings' when loading 'pillar'
```

```
ggplot(Carseats) +
  aes(
    x = Sales,
    y = Price
  ) +
  geom_point(shape = "circle", size = 1.2, colour = "#112446") +
  theme_minimal()
```



```
#As we see a downward slope or negative slope, this indicates that if Sales increases the Price
 decrease and vice-Versa.
```

```
cor(Carseats$Price, Carseats$Sales)
```

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

```
#There is a Negative correlation between sales and price.
```