Assignment 1

# Installing package ISLR  
  
library(ISLR)  
library(latexpdf)

# Summary and Number of rows in Carseats dataset  
  
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

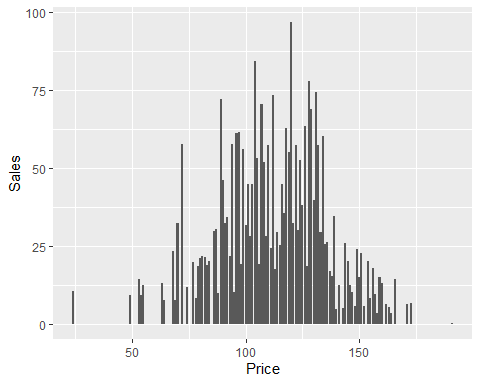
# Maximum Value of Carseat  
  
max(Carseats$Advertising)

## [1] 29

# IQR of Price Attribute  
  
IQR(Carseats$Price)

## [1] 31

# Plotting Sales against Price  
library(ggplot2)  
ggplot(Carseats, aes (x= Price, y= Sales)) + geom\_col()



# Finding Corelation coefficient  
  
x<- Carseats$Price  
y<- Carseats$Sales  
cor(x,y)

## [1] -0.4449507

# The correlation coefficient is -0.4449507.   
# A (-ve) correlation indicates two variables (Sales and Price) that tend to move in opposite directions.  
# A correlation coefficient of -0.8 or lower indicates a strong negative relationship.