---

title: "Assignment1_RohiithRavuri_FML" output: html_document date: "2024-02-04"

```
library(readxl)
Automobile <- read_excel("~/Desktop/Automobile.xls")

View(Automobile)

my_data <- read_excel("~/Desktop/Automobile.xls")

# Descriptive Statistics for Quantitative Variables
summary(my_data$mpg)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    9.00   15.00   24.00   20.79   26.50   30.00
```

```
summary(my_data$cylinders)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   4.000   4.000   4.000   5.684   8.000   8.000
```

```
summary(my_data$displacement)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    79.0   105.5   140.0   201.8   307.0   429.0
```

```
summary(my_data$horsepower)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    46.0    90.0    95.0   123.3   179.0   215.0
```

```
summary(my_data$weight)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##    1835    2179    2430    3004    4017    4732
```

```
summary(my_data$acceleration)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   10.00   14.00   14.50   14.97   15.50   20.50
```

```
summary(my_data$model_year)
```

```
##    Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
##   70.00   70.00   70.00   70.26   70.50   71.00
```

```r
# Descriptive Statistics for Categorical Variables

table(my_data$name)
```

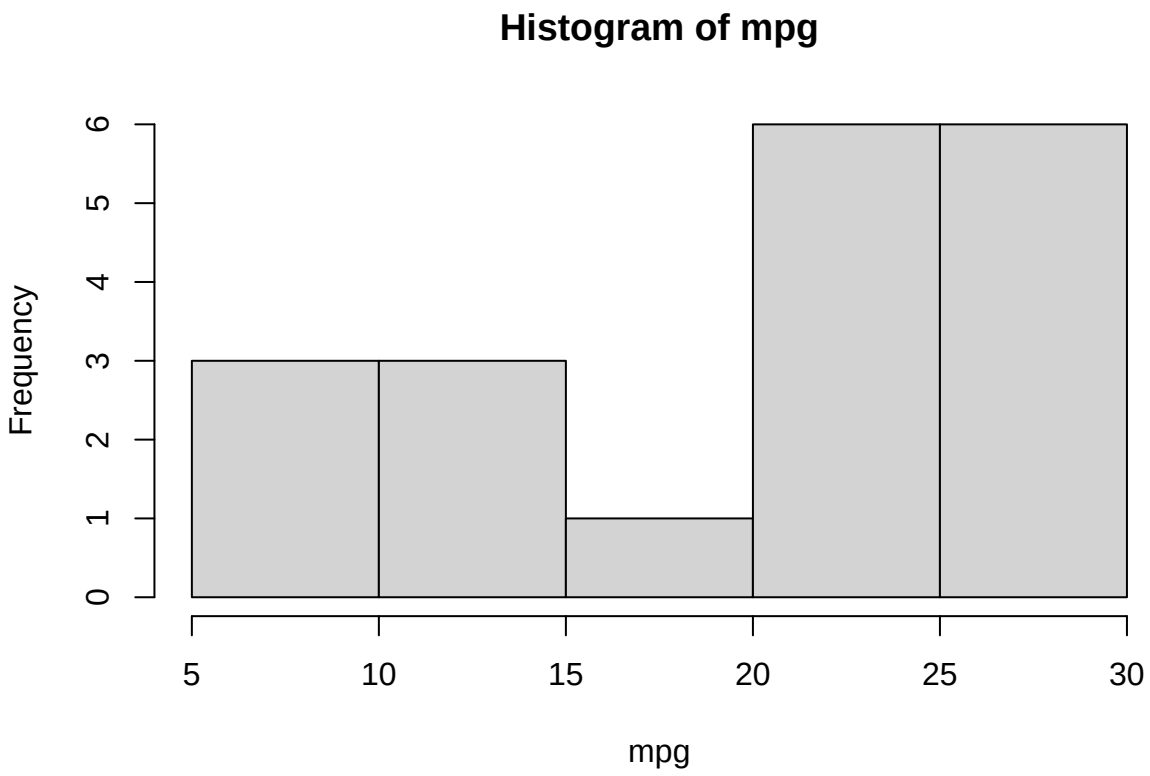
```
##
##                   amc gremlin                   audi 100 ls
##                             1                             1
##            buick skylark 320    chevrolet chevelle malibu
##                             1                             1
##          chevrolet vega 2300                     chevy c20
##                             1                             1
##                 datsun pl510                   dodge d200
##                             2                             1
##                    ford f250             ford galaxie 500
##                             1                             1
##                     hi 1200d                     opel 1900
##                             1                             1
##                   peugeot 304              plymouth duster
##                             1                             1
##                     saab 99e                toyota corona
##                             1                             1
##        toyota corona mark ii volkswagen 1131 deluxe sedan
##                             1                             1
```

```r
table(my_data$origin)
```

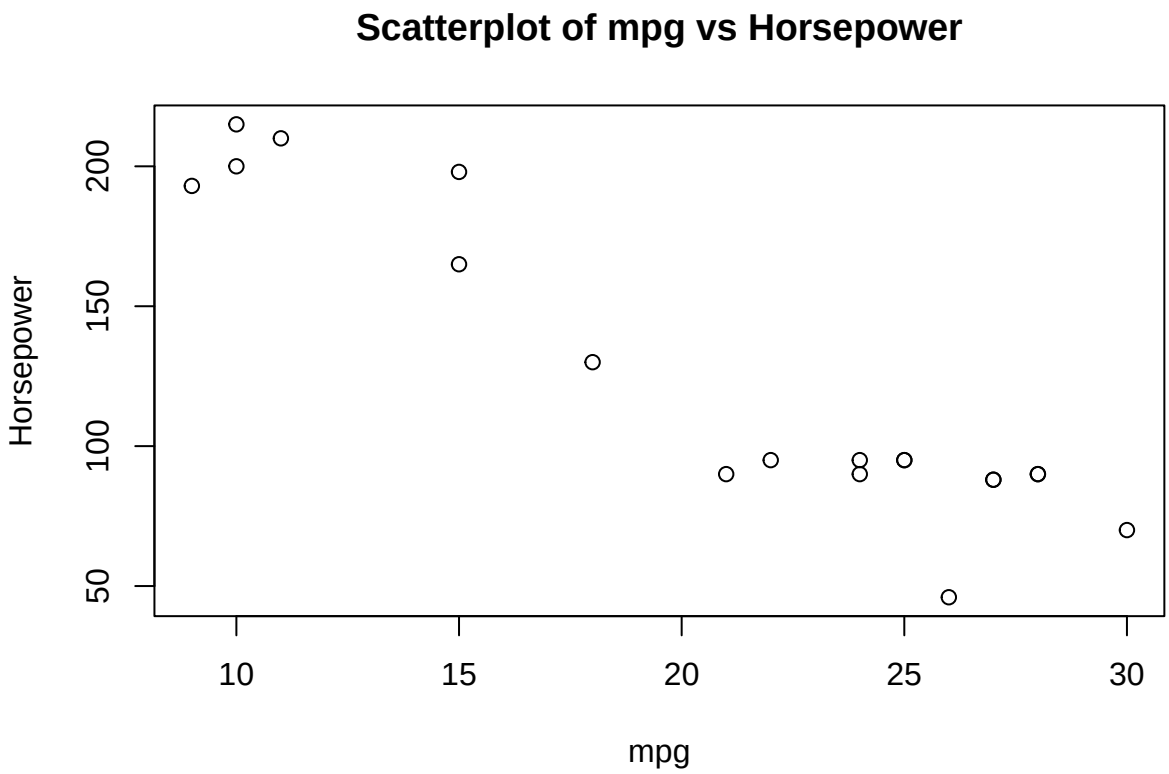
```
##
## europe  japan    usa
##      5      4     10
```

```r
my_data$weight <- log(my_data$weight)

# Plotting a quantitative variable
hist(my_data$mpg, main = "Histogram of mpg", xlab = "mpg")
```




```
# Scatterplot
plot(my_data$mpg, my_data$horsepower, main = "Scatterplot of mpg vs Horsepower", xlab ="mpg", ylab = "H
```


Scatterplot of mpg vs Horsepower
Horsepower
50
100
150
200
10
15
20
25
30
mpg