# Problem Statement

1. Write a program to create **barplots** for all the categorical columns in **mtcars**.

counts<- table(mtcars$cyl)

barplot(counts ,main ="bar plot of cyl",xlab="cyl",ylab = "counts",col="blue")

counts<- table(mtcars$carb)

barplot(counts ,main ="bar plot of carb",xlab="carb",ylab = "counts",col="pink")

counts<- table(mtcars$gear)

barplot(counts ,main ="bar plot of gear",xlab="gear",ylab = "counts",col="yellow")

counts<- table(mtcars$am)

barplot(counts ,main ="bar plot of am",xlab="am",ylab = "counts",col="red")

counts<- table(mtcars$vs)

barplot(counts ,main ="bar plot of vs",xlab="vs",ylab = "counts",col="green")

1. Create a **scatterplot** matrix by gear types in **mtcars** dataset.

#scatter plot for dataset mtcars

library(ggplot2)

library(car)

scatterplotMatrix(~mpg+disp+drat+hp|gear,data=mtcars,

main="Three Gear Options")

1. Write a program to create a **plot density** by class variable.

class(mtcars)

#plot density of mpg variable

d<- density(mtcars$mpg)

plot(d, main="kernel density of mpg")

polygon(d,col="blue",border ="black")

#plot density of disp variable

c<- density(mtcars$disp)

plot(c, main="kernel density of disp")

polygon(c,col="green",border ="red")