DATA ANALYTICS WITH R, EXCEL AND TABLAEU

ASSIGNMENT 7.2 ANSWERS

By ASHISH S SHANBHAG

ashishshanbhag108@gmail.com

Question no:

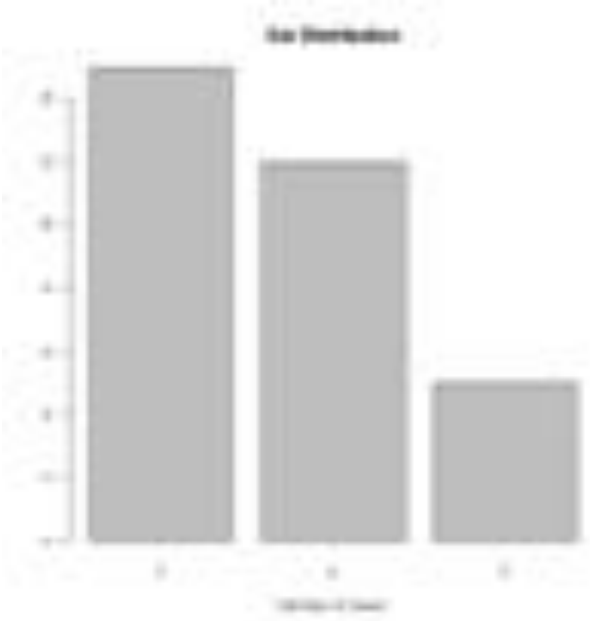
5)

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

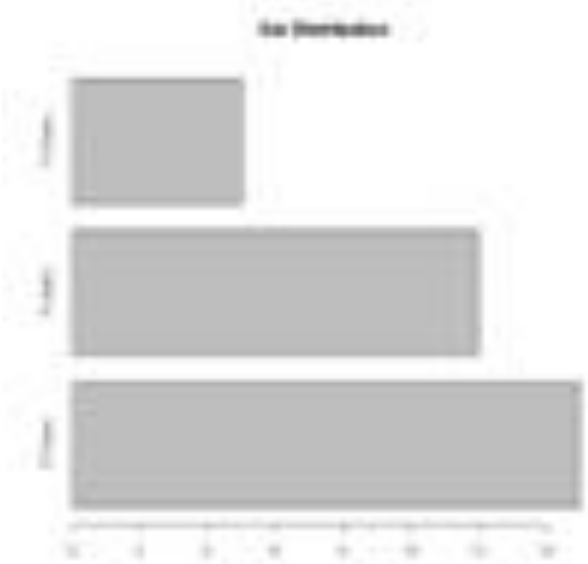
Ans

Simple Bar Plot

```
# Simple Bar Plot
counts <- table(mtcars$gear)
barplot(counts, main="Car Distribution",
   xlab="Number of Gears")
```

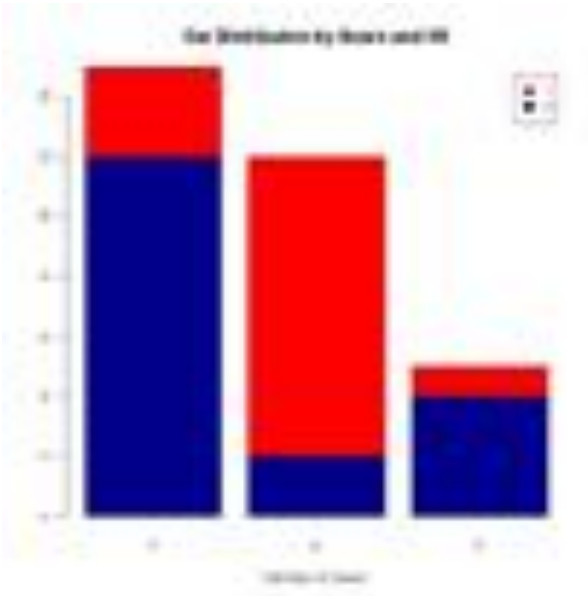


```
# Simple Horizontal Bar Plot with Added Labels
counts <- table(mtcars$gear)
barplot(counts, main="Car Distribution", horiz=TRUE,
  names.arg=c("3 Gears", "4 Gears", "5 Gears"))
```



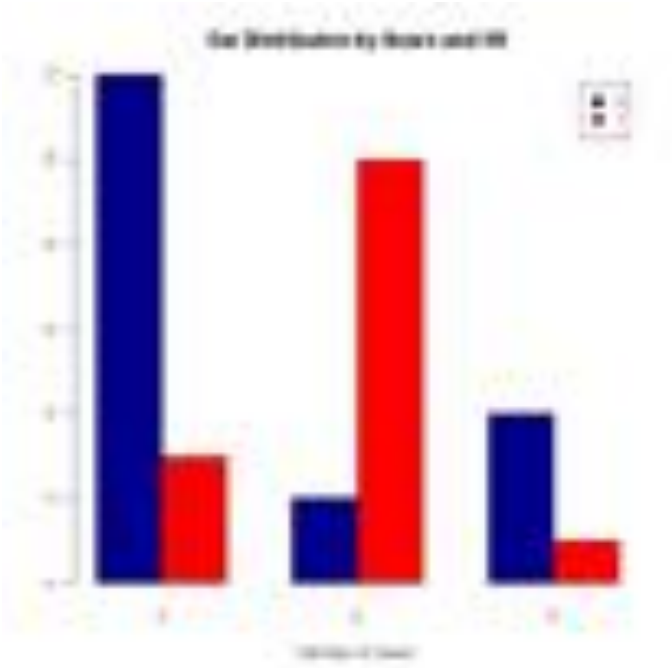
Stacked Bar Plot

```
# Stacked Bar Plot with Colors and Legend
counts <- table(mtcars$vs, mtcars$gear)
barplot(counts, main="Car Distribution by Gears and VS",
  xlab="Number of Gears", col=c("darkblue","red"),
  legend = rownames(counts))
```



Grouped Bar Plot

```
# Grouped Bar Plot
counts <- table(mtcars$vs, mtcars$gear)
barplot(counts, main="Car Distribution by Gears and VS",
  xlab="Number of Gears", col=c("darkblue","red"),
  legend = rownames(counts), beside=TRUE)
```



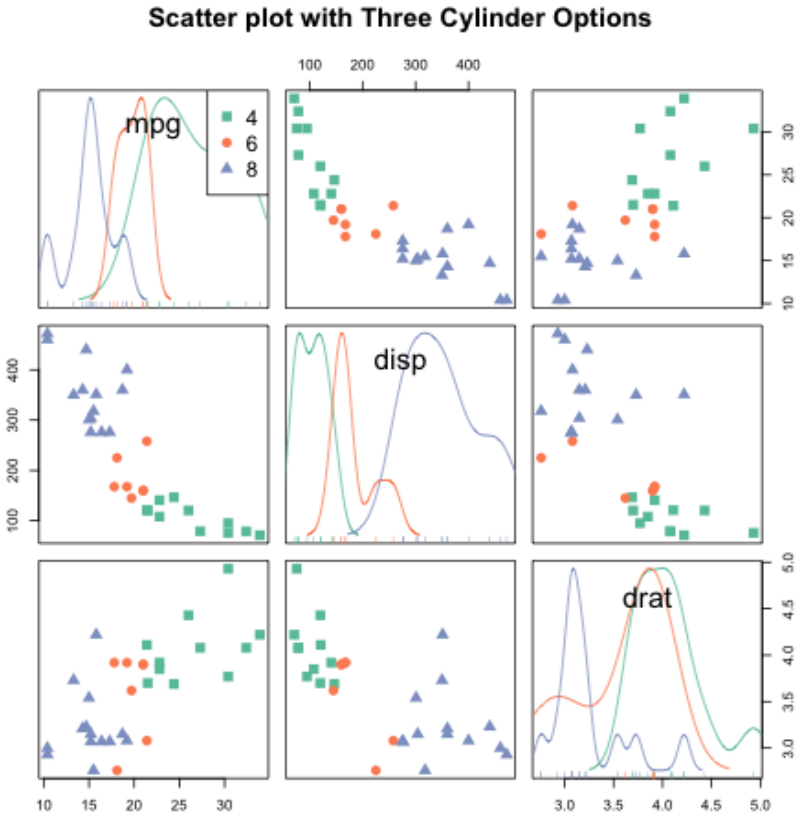
2) Create a scatterplot matrix by gear types in mtcars dataset

Ans

```
# Packages
library(car)
library(RColorBrewer)

# Let's use the car dataset proposed by R
data=mtcars

# Make the plot
my_colors <- brewer.pal(nlevels(as.factor(data$cyl)), "Set2")
scatterplotMatrix(~mpg+disp+drat|cyl, data=data , reg.line="" , smoother="", col=my_colors
, smoother.args=list(col="grey") , cex=1.5 , pch=c(15,16,17) , main="Scatter plot with Three
Cylinder Options")
```



3)

Write a program to create a plot density by class variable

Ans

```
# Kernel Density Plot
d <- density(mtcars$mpg) # returns the density data
plot(d) # plots the results
# Filled Density Plot
d <- density(mtcars$mpg)
plot(d, main="Kernel Density of Miles Per Gallon")
polygon(d, col="red", border="blue")
```