ACADGILD ASSIGNMENT 7.2

SESSION 7: Basic Statistics

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

Answer:

```
library(readr)

mtcars <- read_csv("C:/Users/ManojChowdary/Downloads/mtcars.csv")

View(mtcars)

mtcars

str(mtcars)

library(ggplot2)

library(dplyr)

mtcars1 <- mutate(mtcars,
                  cyl = as.factor(cyl),
                 disp = as.factor(disp),
                  vs = as.factor(vs),
                  am = as.factor(am),
                gear = as.factor(gear),
                carb = as.factor(carb))
```

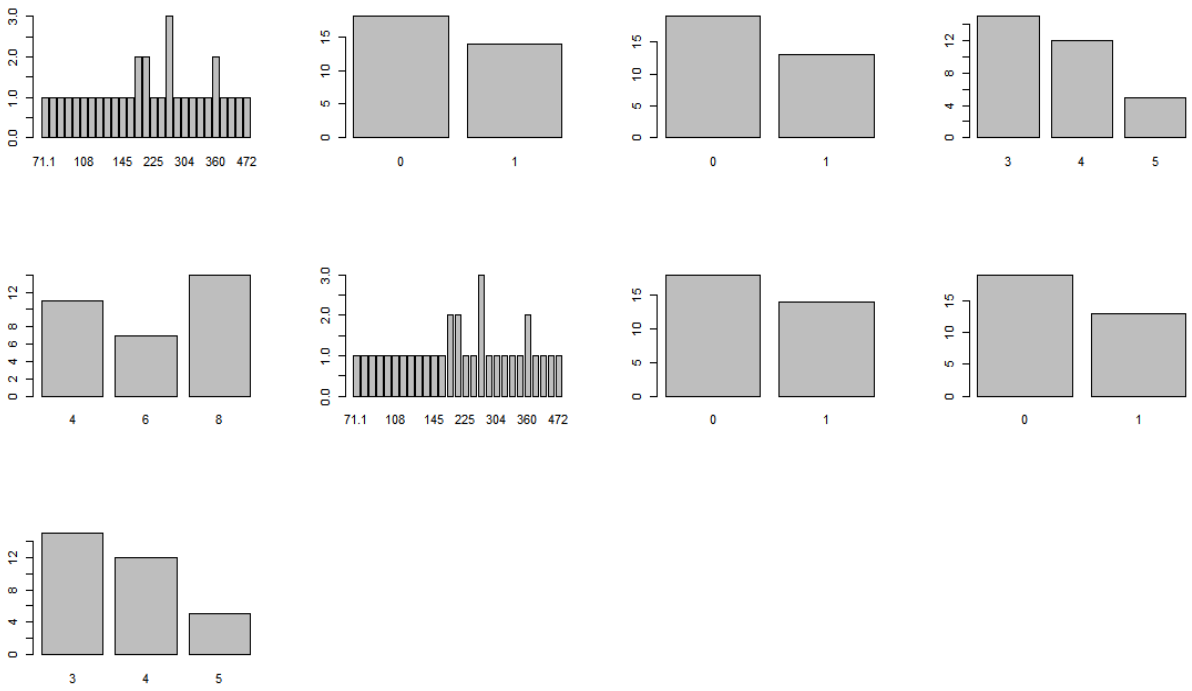
str(mtcars1)

```
is.fact <- sapply(mtcars1, is.factor)

mtcars2 <- mtcars1[,is.fact] # creating dataframe of only factor class of variables

str(mtcars2)        # check structure par(mfrow= c(2,3))        # Set plot area

lapply(lapply(mtcars2[,1:5], table), barplot) # barplots for categorical variables
```



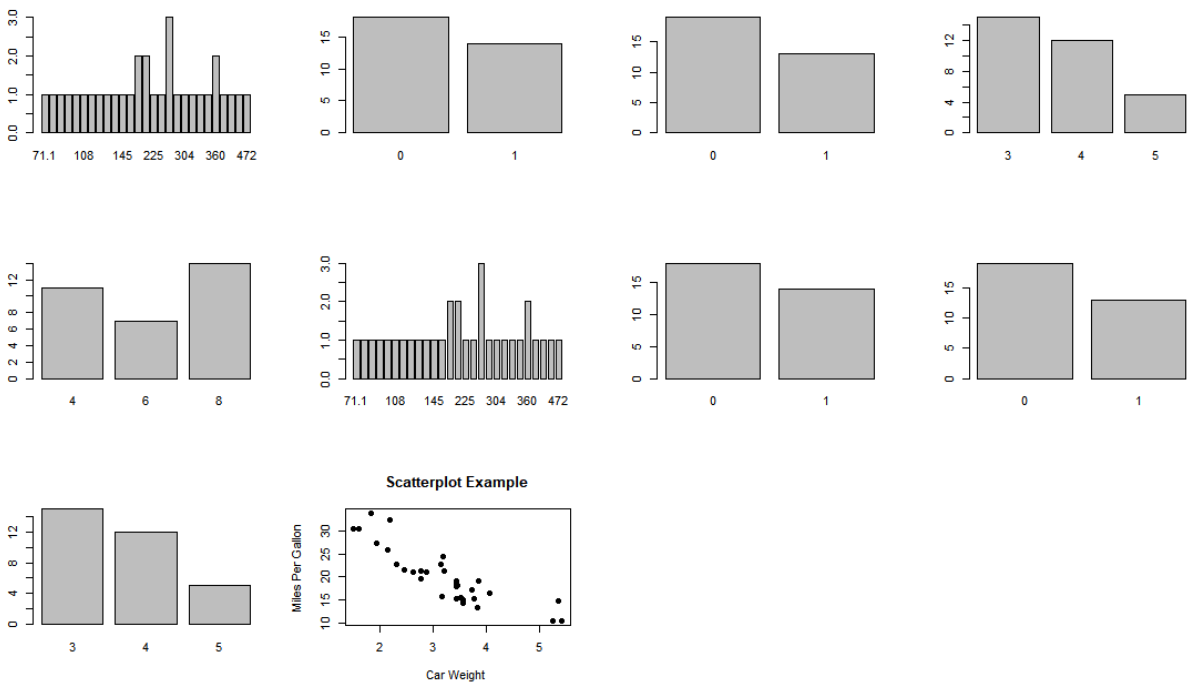
2. Create a scatterplot matrix by gear types in mtcars dataset.

Answer:

```
attach(mtcars)

plot(wt, mpg, main="Scatterplot Example",
```

xlab="Car Weight ", ylab="Miles Per Gallon ", pch=19)



3. Write a program to create a plot density by class variable.

Answer:

```
library(ggplot2)

library(dplyr)

hist(mtcars$mpg)

hist(mtcars$mpg, breaks=12, col="red")

x <- mtcars$mpg

h<-hist(x, breaks=10, col="red", xlab="Miles Per Gallon",
```

```
      main="Histogram with Normal Curve")
xfit<-seq(min(x),max(x),length=40)
yfit<-dnorm(xfit,mean=mean(x),sd=sd(x))
yfit <- yfit*diff(h$mids[1:2])*length(x)
lines(xfit, yfit, col="blue", lwd=2)
```