**1. Histogram for all variables in a dataset mtcars. Write a program to create histograms for all columns.**

***Ans:***

str(mtcars) # For checking the structure of the dataset.

library(ggplot2)

library(tidyr)

mtcars %>% gather() %>% head()

ggplot(gather(mtcars), aes(value)) +

geom\_histogram(bins = 10) +

facet\_wrap(~key, scales = 'free\_x')

**2. Check the probability distribution of all variables in mtcars**

***Ans:***

mtcars

par(mfrow = c(3, 4))

prob <- function(prob, colname){

x <- sort(prob)

hx <- dnorm(prob, mean(x), sd(x))

p <- plot(x, hx, type="l", xlab=colname, ylab='probability')

}

mapply(prob, mtcars[2:11],colnames(mtcars[2:11]))

**3. Write a program to create boxplot for all variables.**

***Ans:***

mtcars

par(mfrow = c(3, 4))

mapply(boxplot, mtcars[2:11], xlab = colnames(mtcars[2:11]))