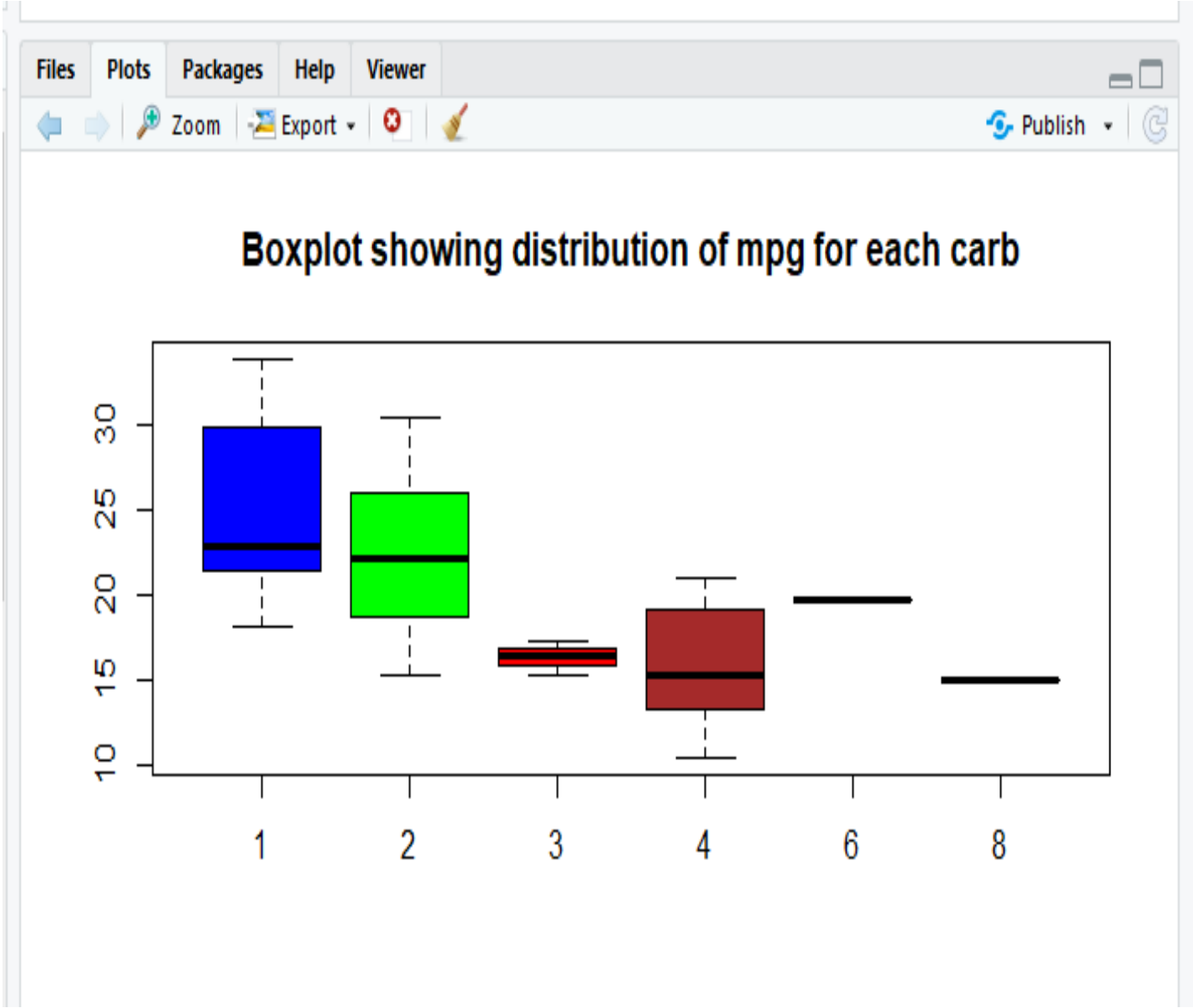
Problem Statement

1. Create a **box and whisker plot** by class using **mtcars** dataset.

Answer :

```
> library("readr", lib.loc="~/R/win-library/3.5")
> library('ggplot2',lib.loc ="~/R/win-library/3.5")
> library("dplyr", lib.loc="~/R/win-library/3.5")
> mtcars<-read.csv('C:/Users/Vikram/Desktop/Acad/mtcars.csv')
> View(mtcars)
> str(mtcars)
'data.frame':  32 obs. of  12 variables:
 $ model: Factor w/ 32 levels "AMC Javelin",..: 18 19 5 13 14 31 7 21 20 22 ...
 $ mpg  : num  21 21 22.8 21.4 18.7 18.1 14.3 24.4 22.8 19.2 ...
 $ cyl  : int  6 6 4 6 8 6 8 4 4 6 ...
 $ disp : num  160 160 108 258 360 ...
 $ hp   : int  110 110 93 110 175 105 245 62 95 123 ...
 $ drat : num  3.9 3.9 3.85 3.08 3.15 2.76 3.21 3.69 3.92 3.92 ...
 $ wt   : num  2.62 2.88 2.32 3.21 3.44 ...
 $ qsec : num  16.5 17 18.6 19.4 17 ...
 $ vs   : int  0 0 1 1 0 1 0 1 1 1 ...
 $ am   : int  1 1 1 0 0 0 0 0 0 0 ...
 $ gear : int  4 4 4 3 3 3 3 4 4 4 ...
 $ carb : int  4 4 1 1 2 1 4 2 2 4 ...
> 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),mpg = mpg, hp = h
p, drat = drat, qsec=qsec)
> str(mtcars1)
'data.frame':  32 obs. of  12 variables:
 $ model: Factor w/ 32 levels "AMC Javelin",..: 18 19 5 13 14 31 7 21 20 22 ...
 $ mpg  : num  21 21 22.8 21.4 18.7 18.1 14.3 24.4 22.8 19.2 ...
 $ cyl  : Factor w/ 3 levels "4","6","8": 2 2 1 2 3 2 3 1 1 2 ...
 $ disp : Factor w/ 27 levels "71.1","75.7",..: 13 13 6 16 23 15 23 12 10 14 ...
 $ hp   : int  110 110 93 110 175 105 245 62 95 123 ...
 $ drat : num  3.9 3.9 3.85 3.08 3.15 2.76 3.21 3.69 3.92 3.92 ...
 $ wt   : num  2.62 2.88 2.32 3.21 3.44 ...
 $ qsec : num  16.5 17 18.6 19.4 17 ...
 $ vs   : Factor w/ 2 levels "0","1": 1 1 2 2 1 2 1 2 2 2 ...
 $ am   : Factor w/ 2 levels "0","1": 2 2 2 1 1 1 1 1 1 1 ...
 $ gear : Factor w/ 3 levels "3","4","5": 2 2 2 1 1 1 1 2 2 2 ...
 $ carb : Factor w/ 6 levels "1","2","3","4",..: 4 4 1 1 2 1 4 2 2 4 ...
> boxplot(mpg~carb, data = mtcars1, col = c("Blue","Green","Red","brown","black","gray
"),main="Boxplot showing distribution of mpg for each carb")
```


Files
Plots
Packages
Help
Viewer
Zoom
Export
Publish
Boxplot showing distribution of mpg for each carb
10
15
20
25
30
1
2
3
4
6
8