Topic 8 Exercise

* Using the mpg dataset in ggplot2, try to

1. generate a scatter plot showing relationship between city miles per gallon (cty) and the engine displacement, in litres (displ). Edit the axis title, font size, legend appropriately.
2. generate a boxplot showing relationship between city miles per gallon (cty) and the engine displacement, in litres (displ). Edit the axis title, font size, legend appropriately.
3. combine the scatter plot and boxplot into one plot and save it to a png file with 300 ppi.

**Code:**

##Topic 8 Exercise##

##load in MPG data set from ggplot2##

library(ggplot2)

#Question 1

#Generate Scatter plot showing the relationship between

#City miles per gallon(cty) and engine displacement(displ)

plot1<- ggplot(data = mpg, mapping = aes(displ,cty, colour = class))+

geom\_point()+

#geom\_smooth(method=lm, se = F) +

labs(x = "Engine displacement (liters)", y = "City miles per gallon")+

theme(text = element\_text(size = 10), legend.position = c(.8,.8))

#Question 2

#Generate box plots showing the relationship between

#City miles per gallon(cty) and engine displacement(displ)

plot2 <- ggplot(data = mpg, mapping = aes(displ,cty, colour = class))+

geom\_boxplot()+

labs(x = "Engine displacement (liters)", y = "City miles per gallon")+

theme(text = element\_text(size = 10), legend.position = c(.8,.8))

#Question 3

#combine the above plots into one plot and

#save it to a png file with 300 ppi

#load Multiplot script from your saved short course files

source("X://R course (sponsored by BERD) 2021//PartII// Topic8//multiplot.R")

png("Multiplots Q1 Q2.png", width = 5, height = 5, units = "in",res = 300)

multiplot(plot1, plot2, cols = 2)

dev.off()

**PLOTS:**

