19BCE2311 Gaurav Singh

Data Visualization

Data Import Code:

Code:

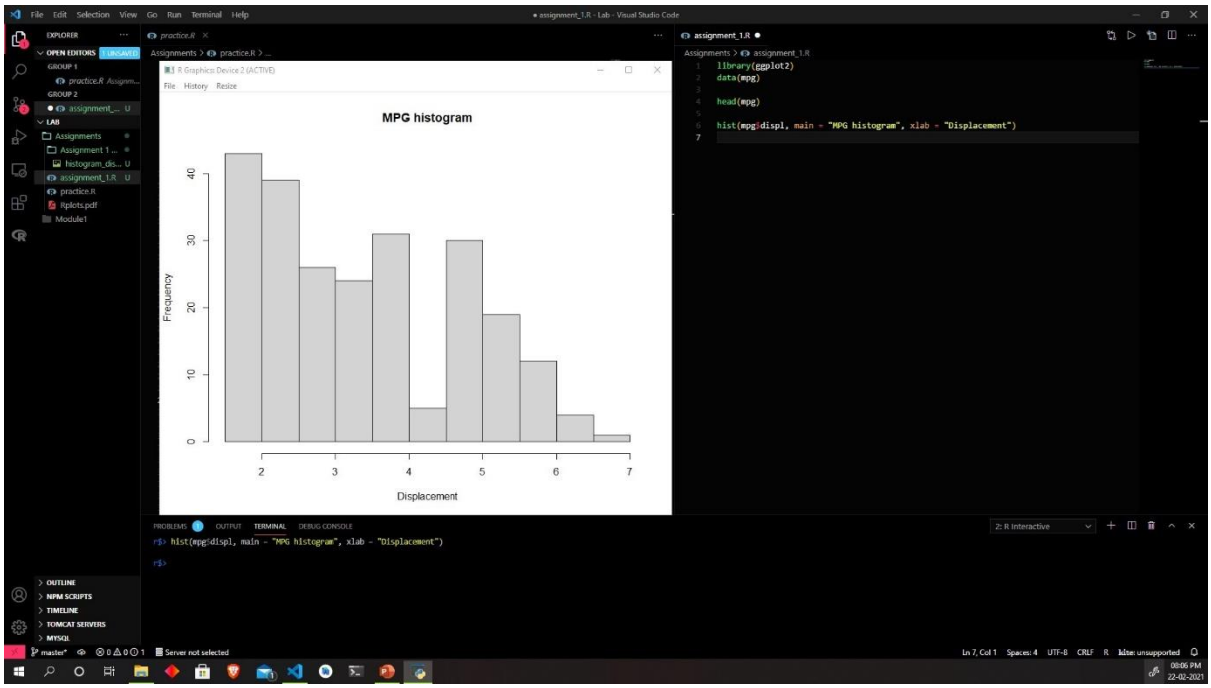
```
library(ggplot2)
data(mpg)

head(mpg)
```

Outputs :

1)

Image:

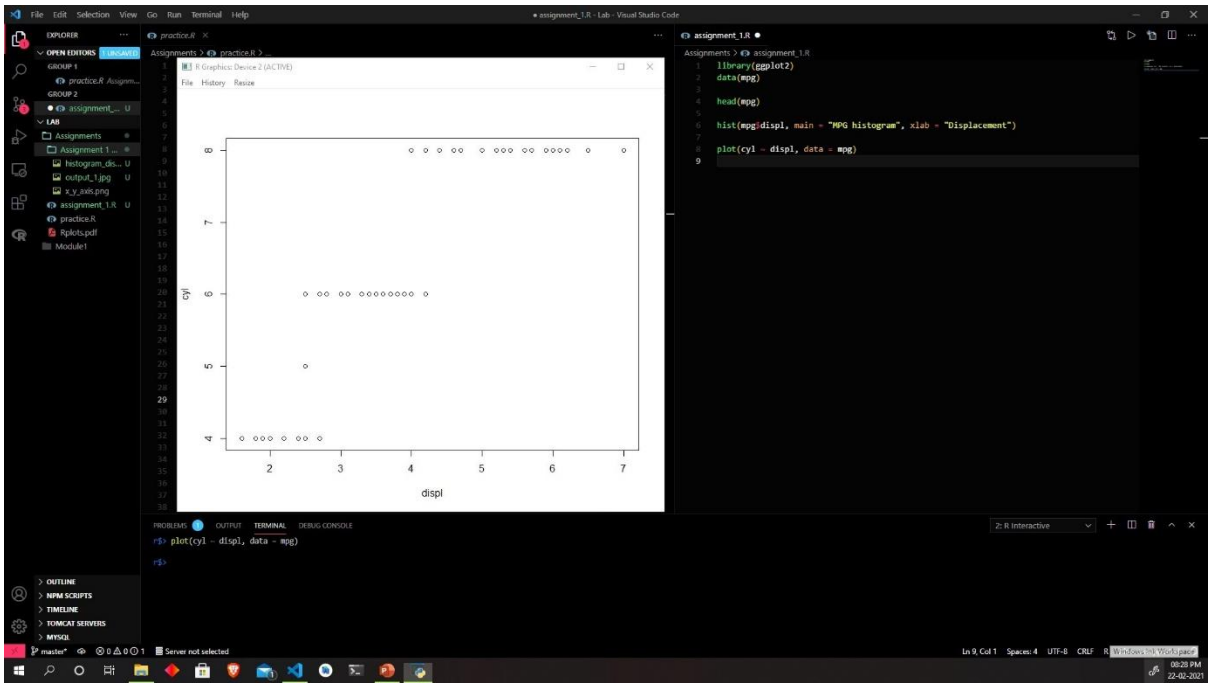


Code:

```
Hist(mpg$displ, main = "MPG histogram", xlab = "Displacement"
```

2)

Image:

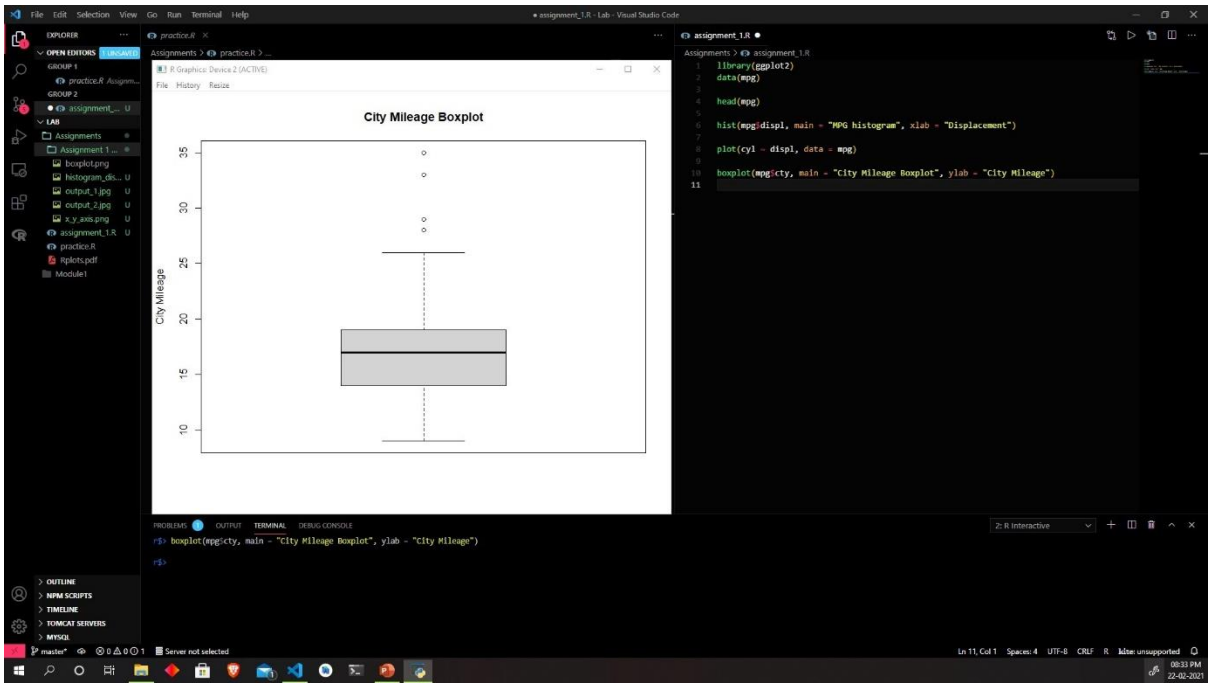


Code :

```
plot(cyl ~ displ, data = mpg)
```

3)

Image:

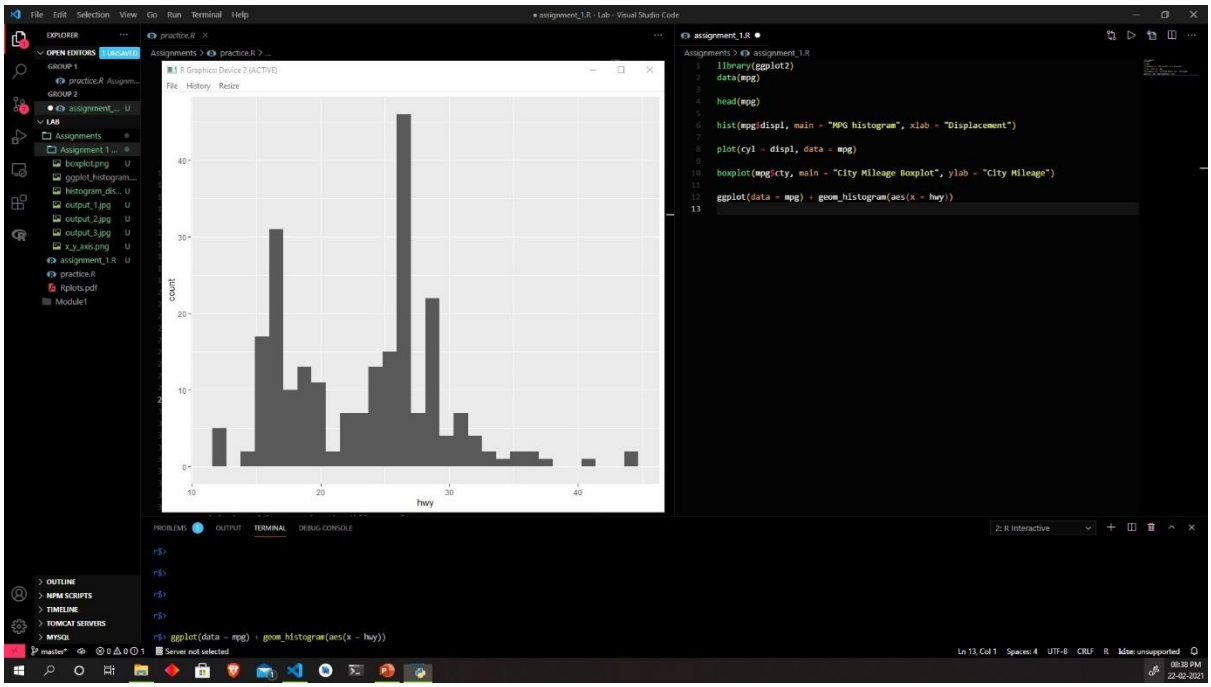


Code:

```
boxplot(mpg$cty, main = "City Mileage Boxplot", ylab = "City Mileage")
```

4)

Image:

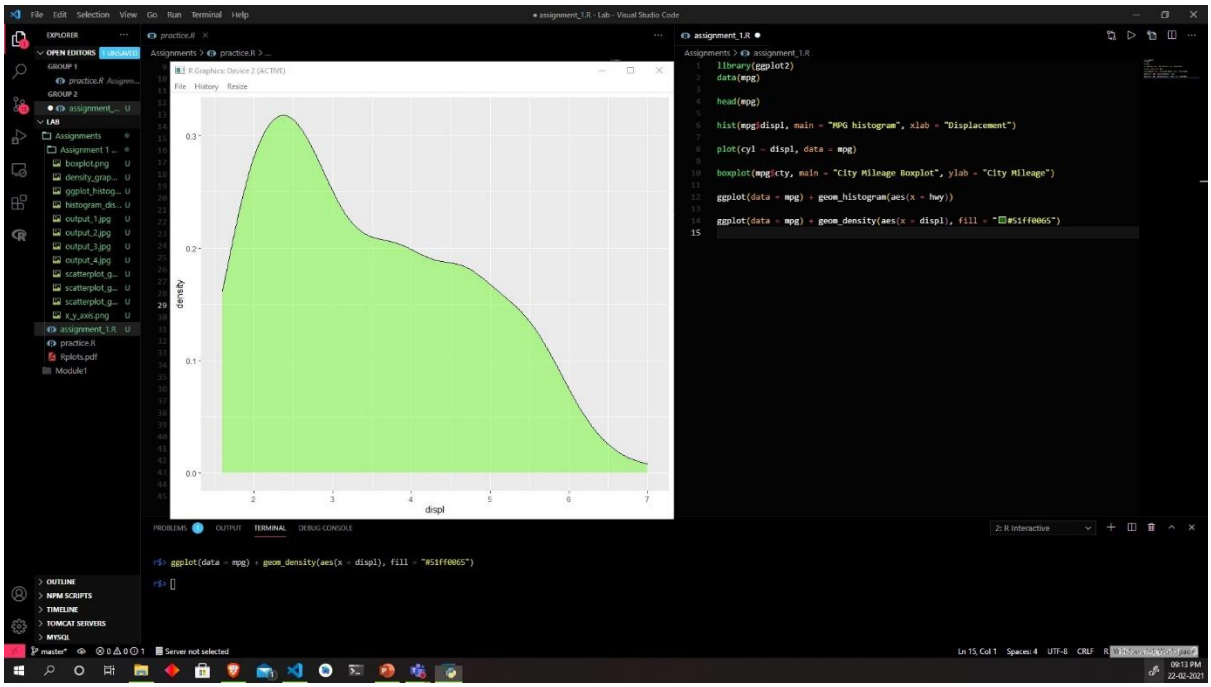


Code:

```
ggplot(data = mpg) + geom_histogram(aes(x = hwy))
```

5)

Image:

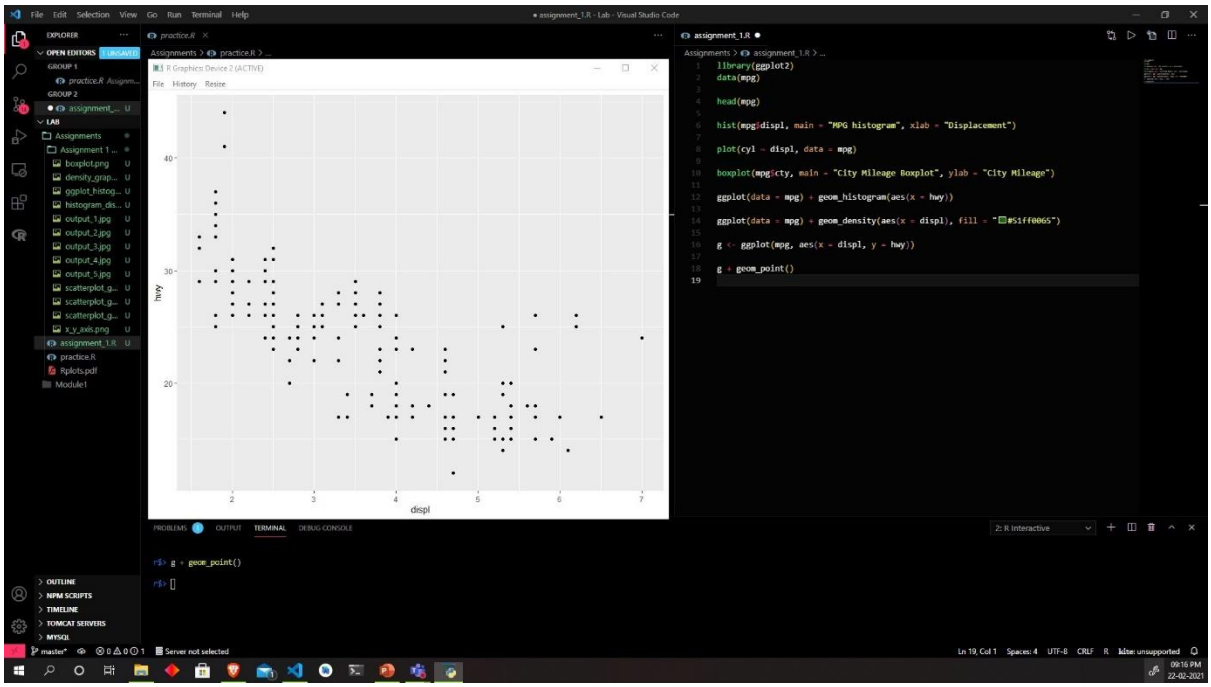


Code:

```
ggplot(data = mpg) + geom_density(aes(x = displ), fill = "#51ff0065")
```

6)

Image:

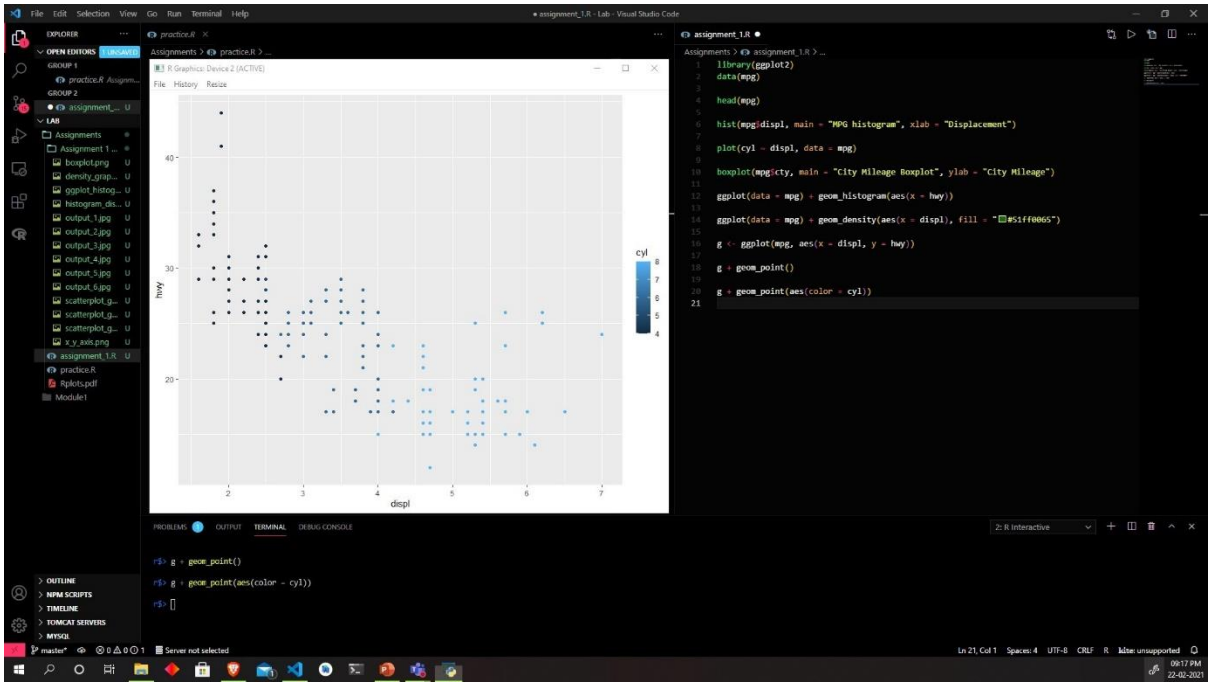


Code:

```
g <- ggplot(mpg, aes(x = displ, y = hwy))
g + geom_point()
```

7)

Image:

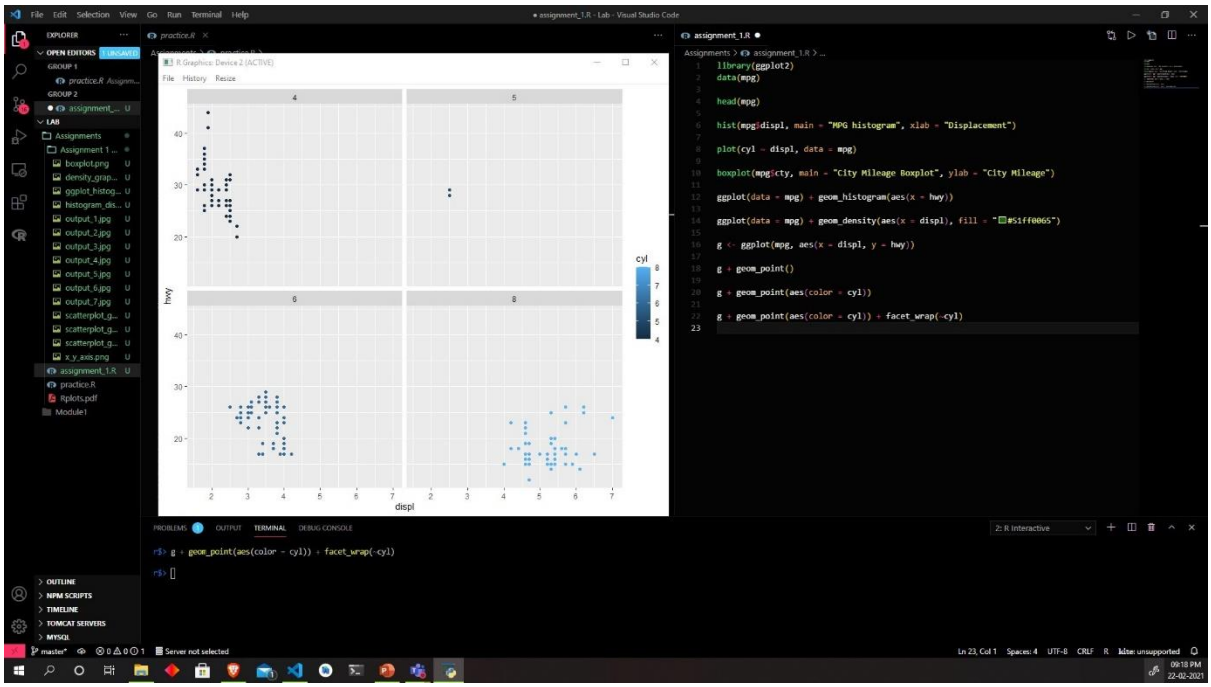


Code:

```
g + geom_point(aes(color = cyl))
```

8)

Image:

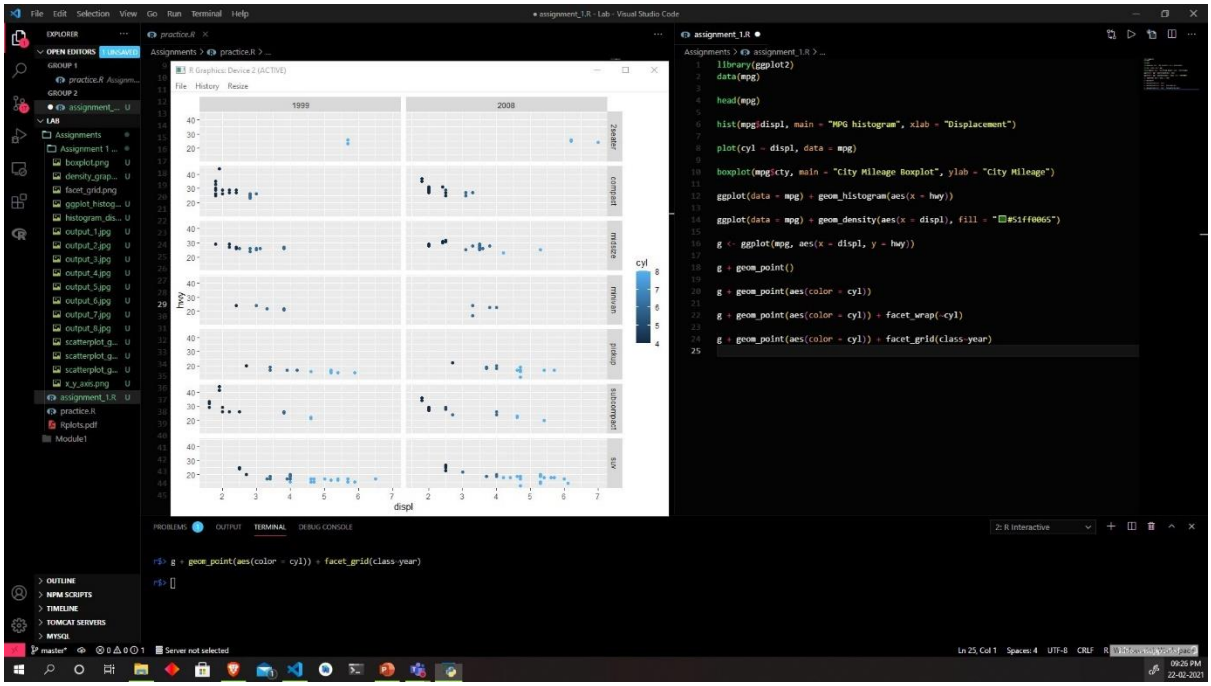


Code:

```
g + geom_point(aes(color = cyl)) + facet_wrap(~cyl)
```

9)

Image:

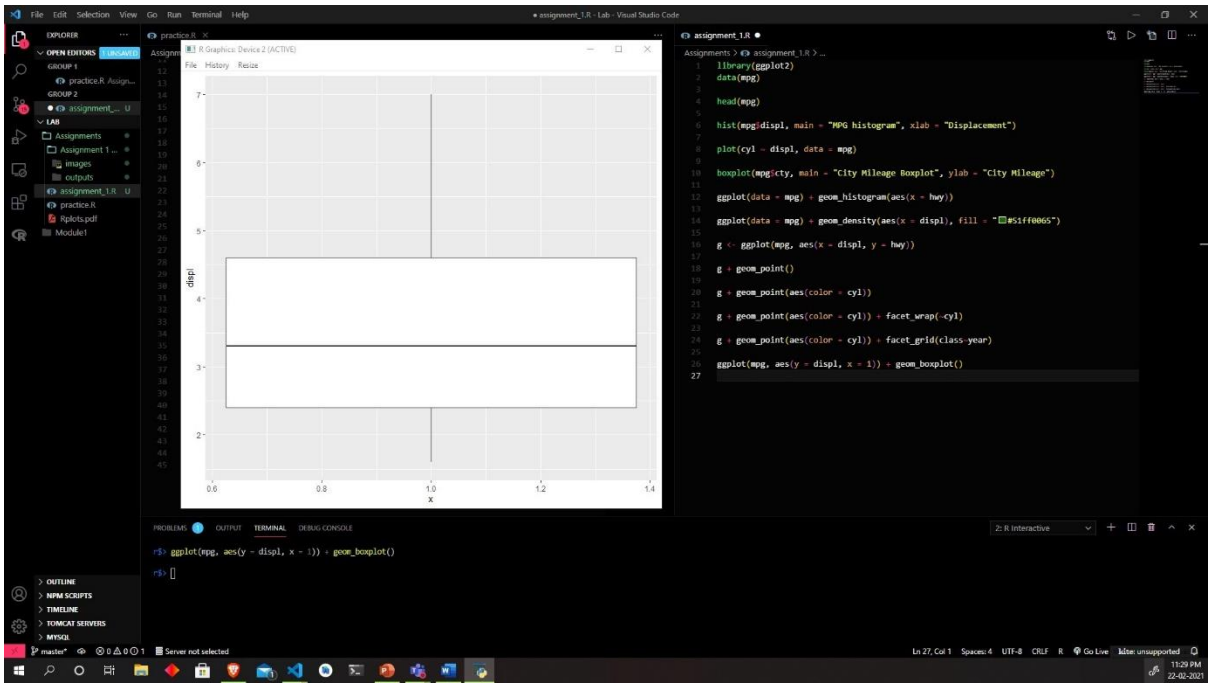


Code:

```
g + geom_point(aes(color = cyl)) + facet_grid(class~year)
```

10)

Image:

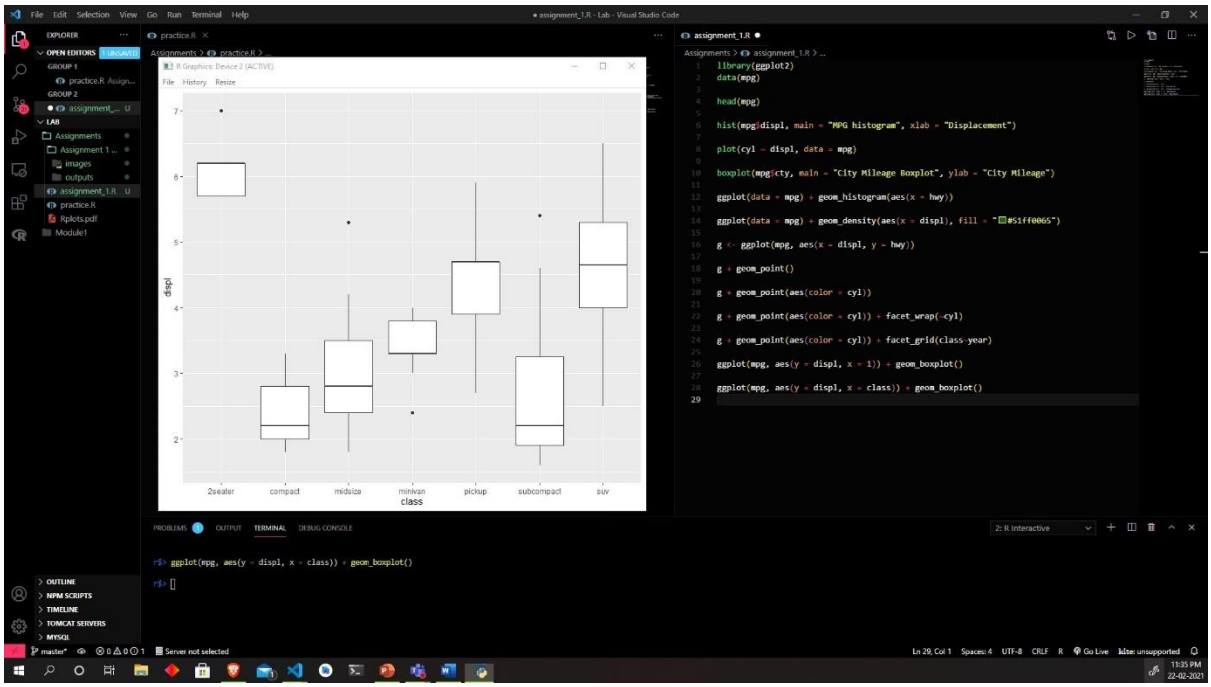


Code:

```
ggplot(mpg, aes(y = displ, x = 1)) + geom_boxplot()
```

11)

Image:

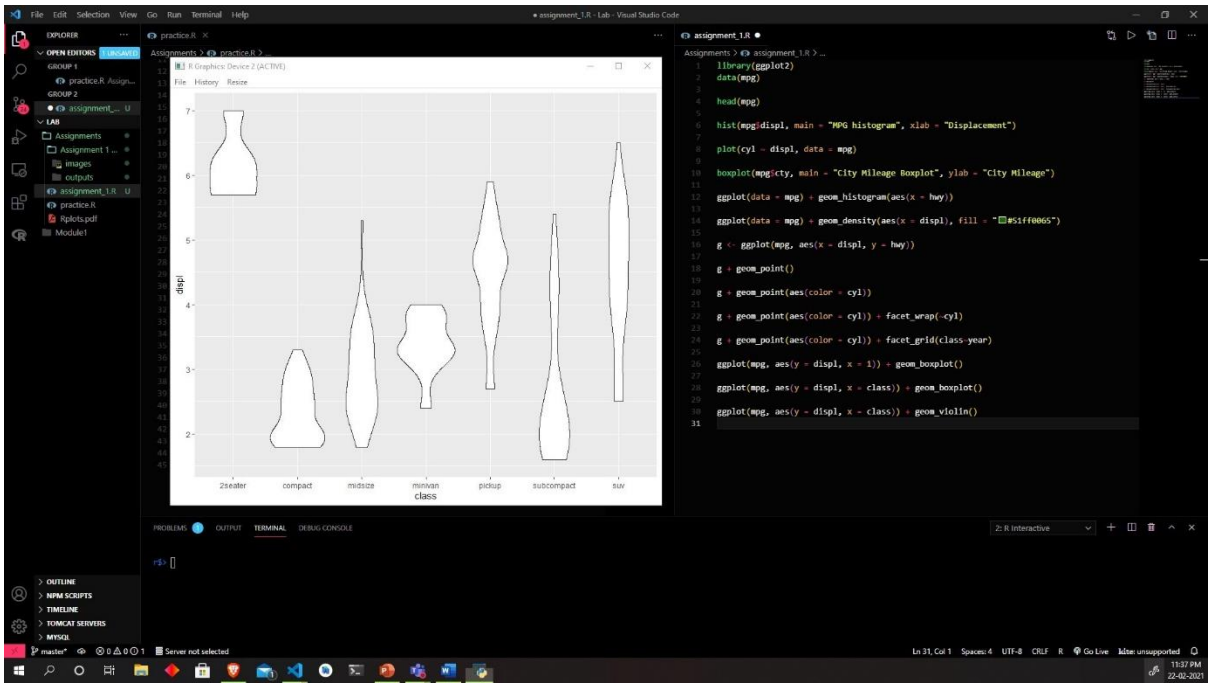


Code:

```
ggplot(mpg, aes(y = displ, x = class)) + geom_boxplot()
```

12)

Image:

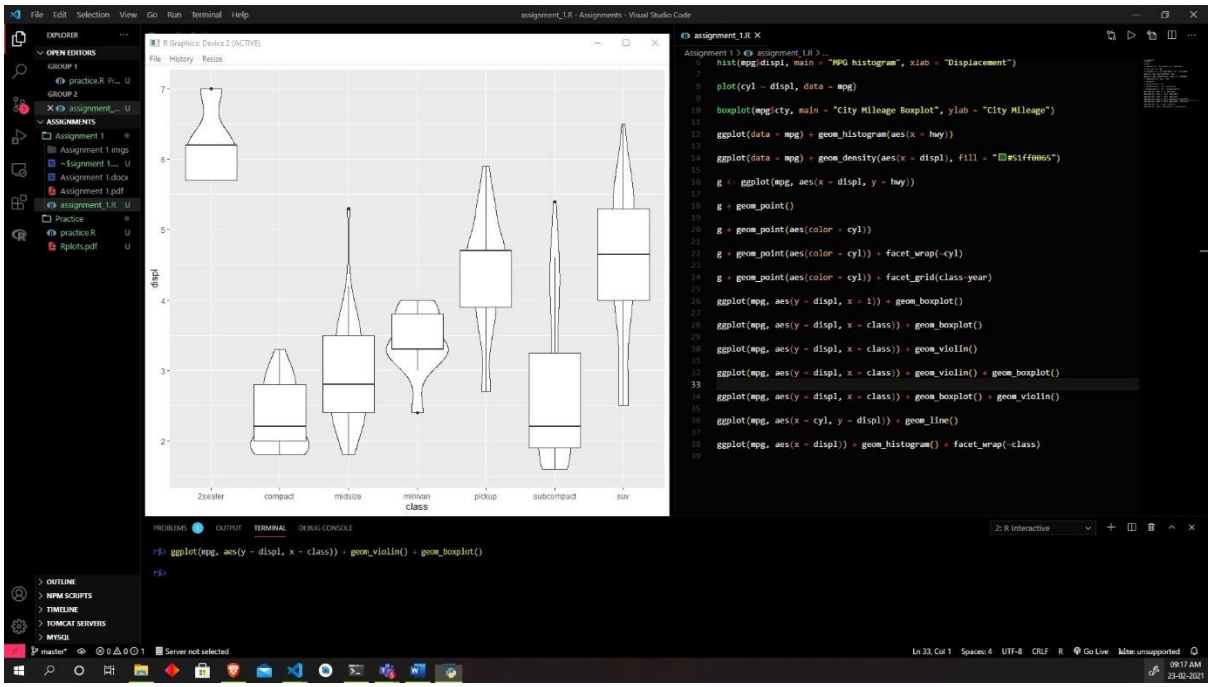


Code:

```
ggplot(mpg, aes(y = displ, x = class)) + geom_violin()
```

13)

Image:

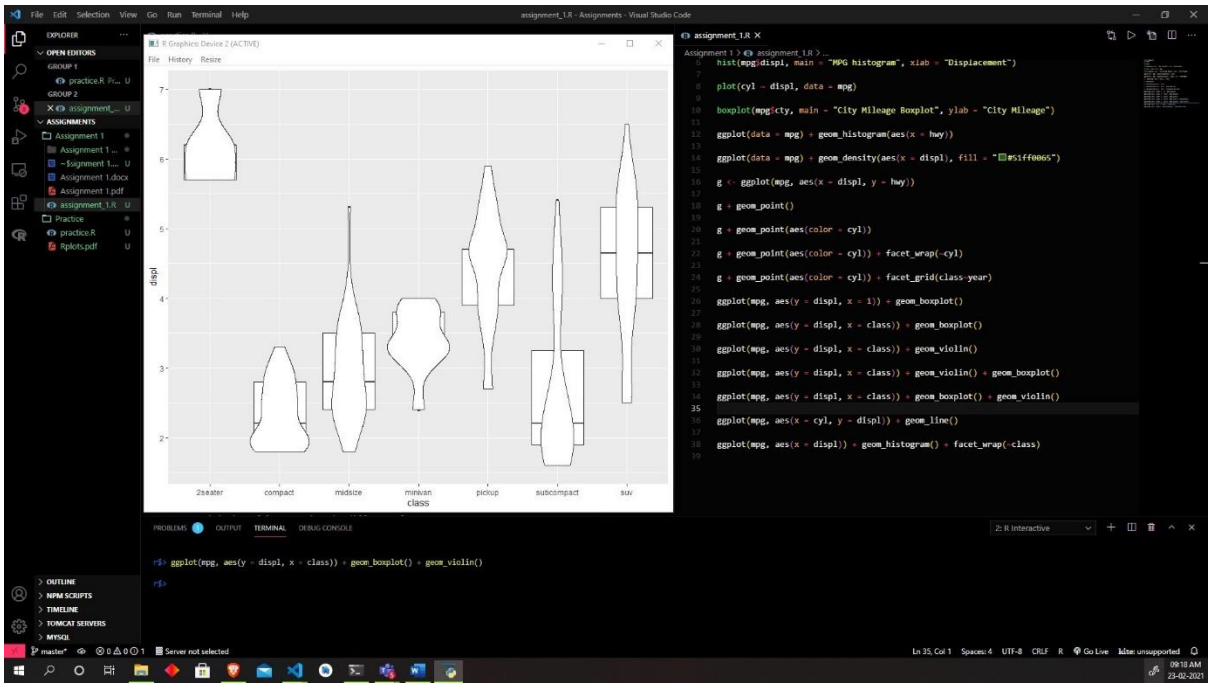


Code:

```
ggplot(mpg, aes(y = displ, x = class)) + geom_violin() + geom_boxplot()
```

14)

Image:

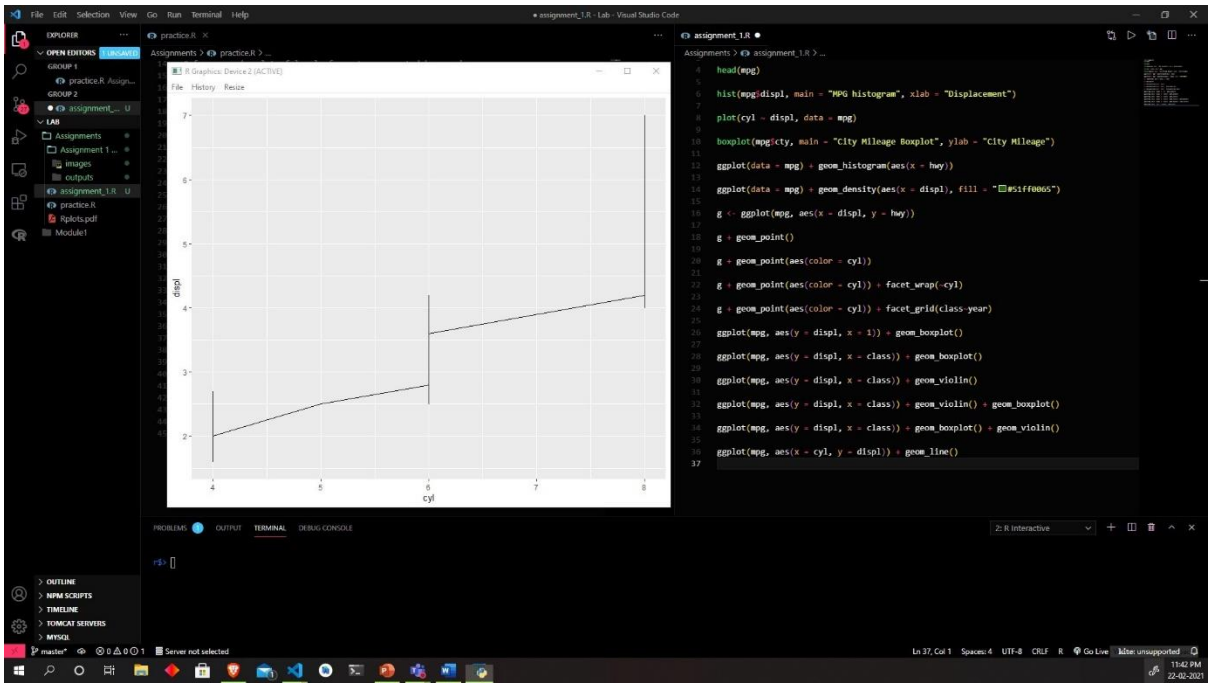


Code:

```
ggplot(mpg, aes(y = displ, x = class)) + geom_boxplot() + geom_violin()
```

15)

Image:

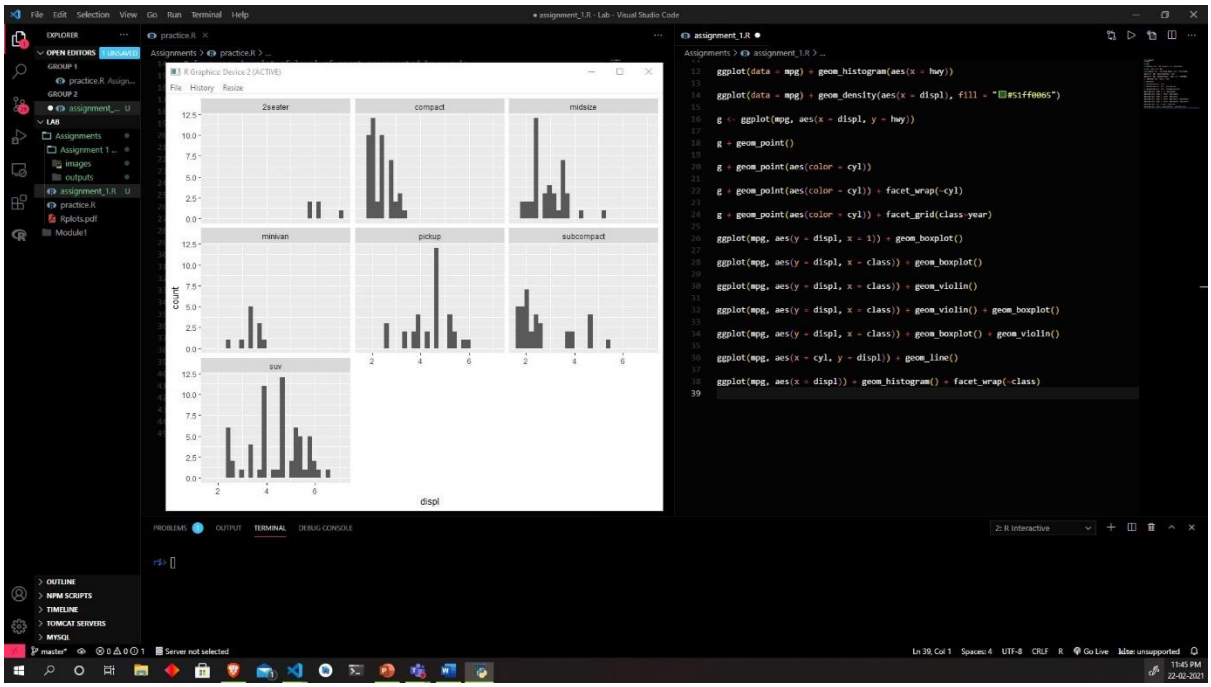


Code:

```
ggplot(mpg, aes(x = cyl, y = displ)) + geom_line()
```

16)

Image:



Code :

```
ggplot(mpg, aes(x = displ)) + geom_histogram() + facet_wrap(~class)
```