CPSC 375 HW 2

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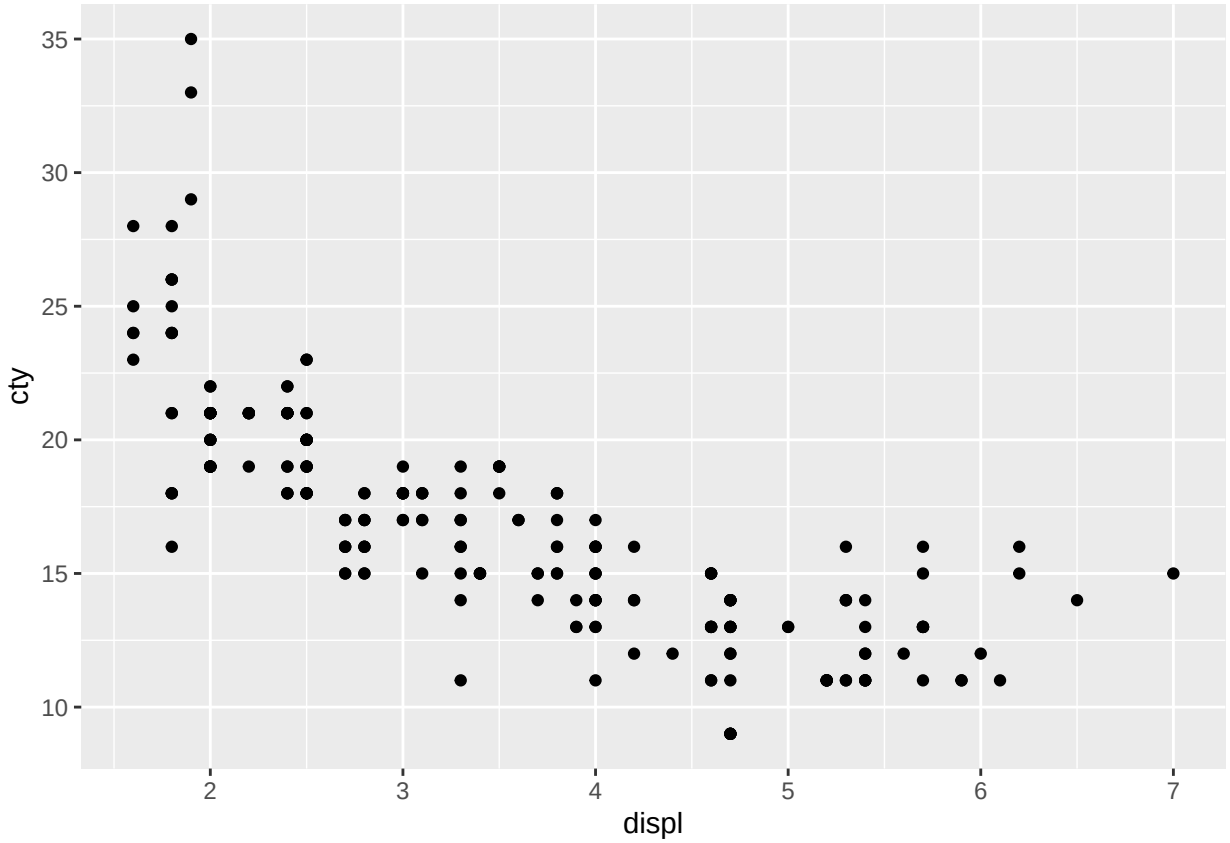
1. Installing ggplot2 also installs some datasets, including the mpg dataset (see help(mpg) for a description of the data). Generate the following graphs from the mpg dataset. All plots should use ggplot. Include both the R code and paste the plot as an image. ggplot

```
library(ggplot2)
```

a) Plot a scatterplot of variables displ and cty.

```
ggplot(data=mpg)+geom_point((mapping=aes(x=displ, y=cty)))
```



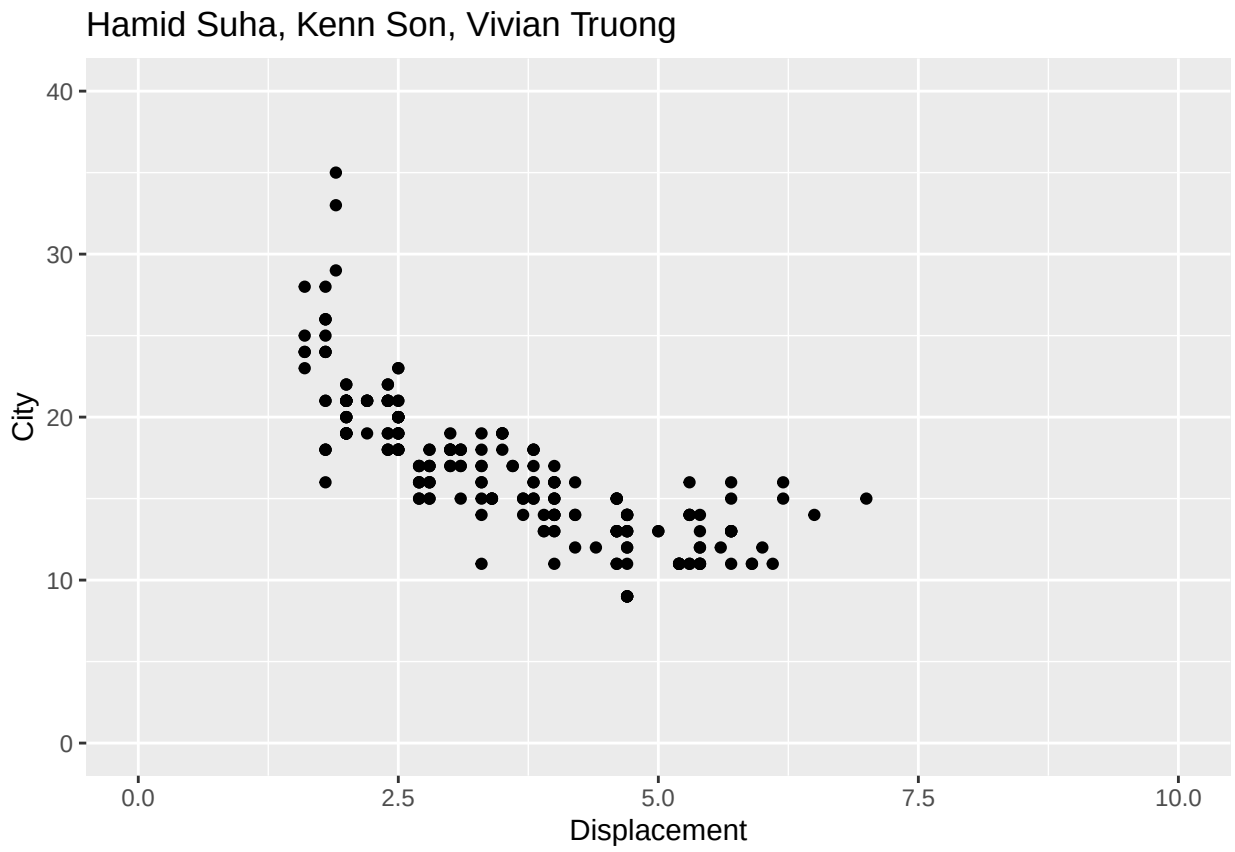
b) Redraw the previous scatterplot but also add all these:

- more descriptive x and y-axis labels,

- a title that should be the names of all group members, and

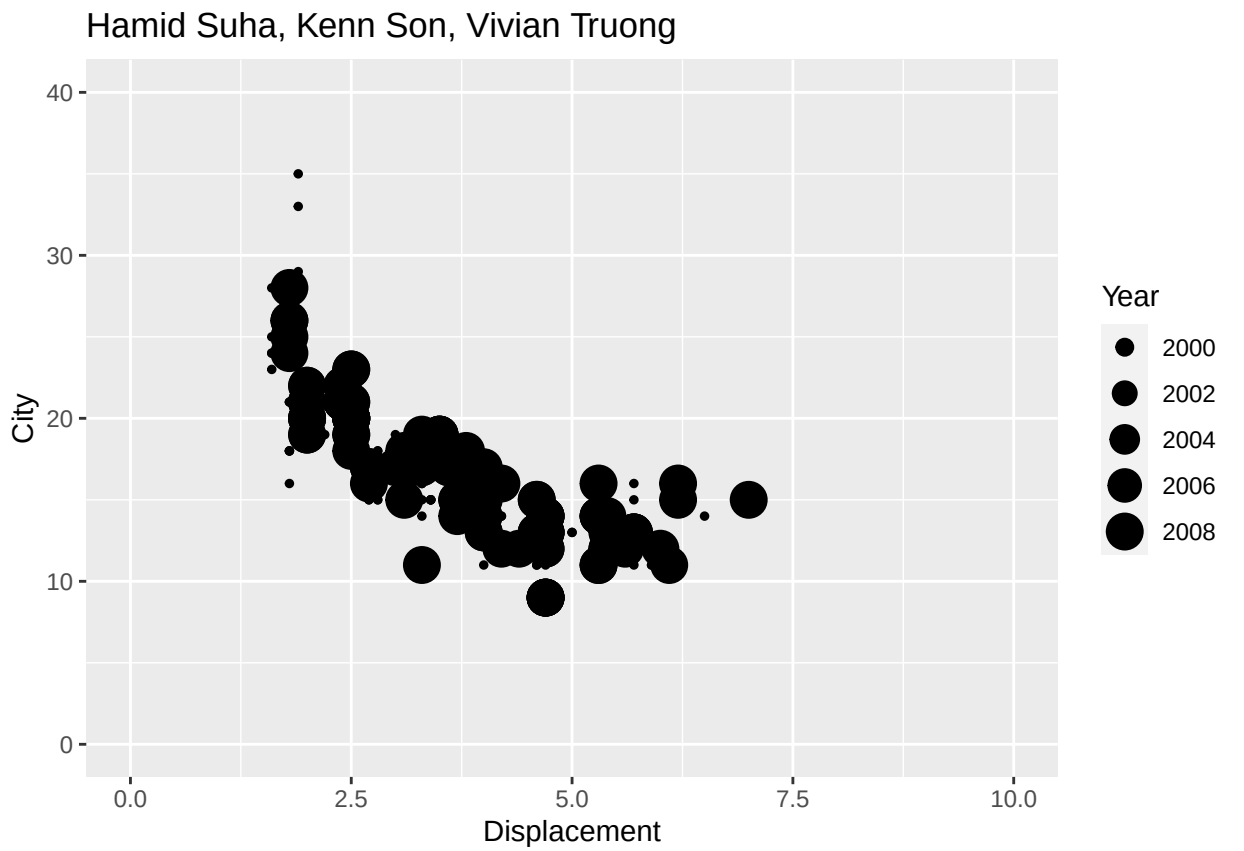
- set cty limits to (0,40) and displ limits to (0,10).

```
ggplot(data=mpg)+geom_point(mapping=aes(x=displ, y=cty)) + labs(x="Displacement",
y = "City", title = "Hamid Suha, Kenn Son, Vivian Truong") + ylim(c(0,40)) + xlim(c(0,10))
```



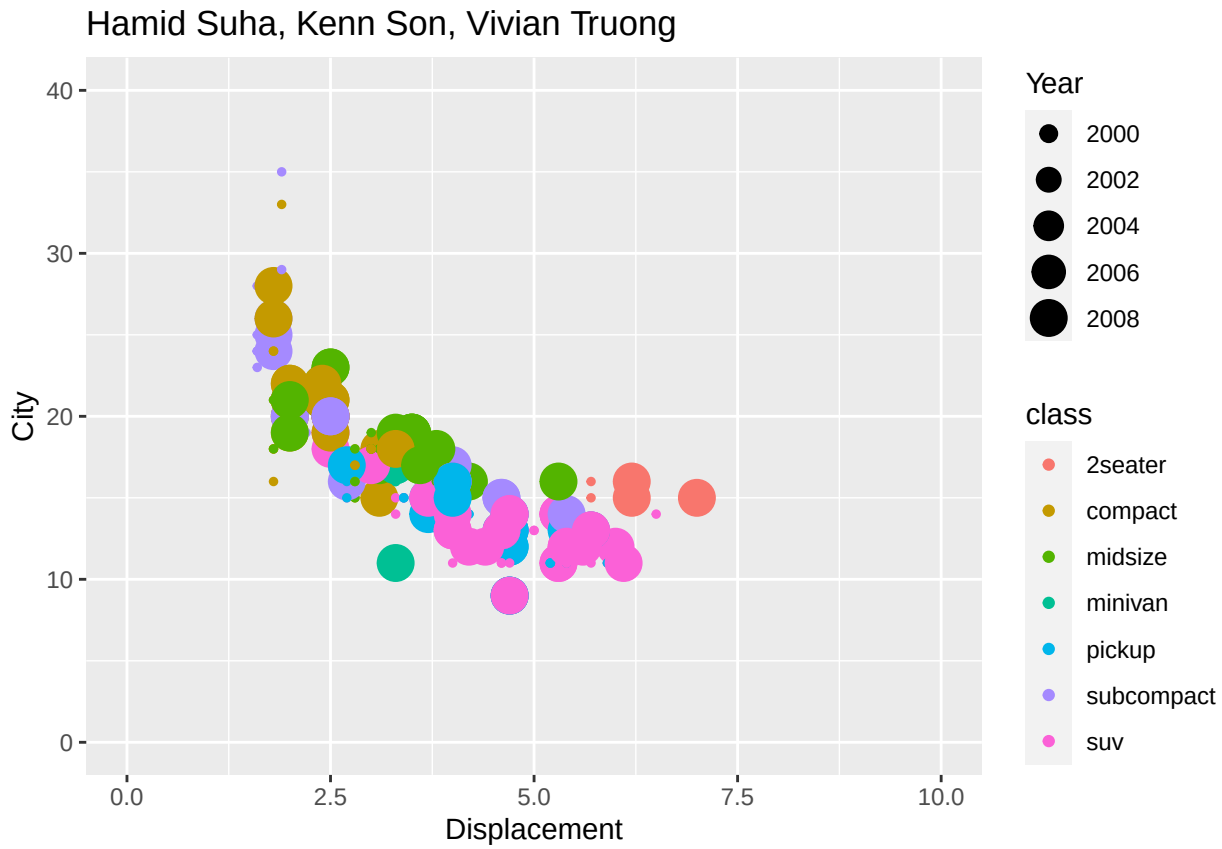
c) Plot a scatterplot of variables displ and cty. Show variable year also.

```
ggplot(data=mpg)+geom_point(mapping=aes(x=displ, y=cty, size=year)) + labs(
x="Displacement", y = "City", size = "Year", title = "Hamid Suha, Kenn Son, Vivian Truong"
) + ylim(c(0,40)) + xlim(c(0,10))
```



d) Plot a scatterplot of variables displ and cty. Show variables year and class also.

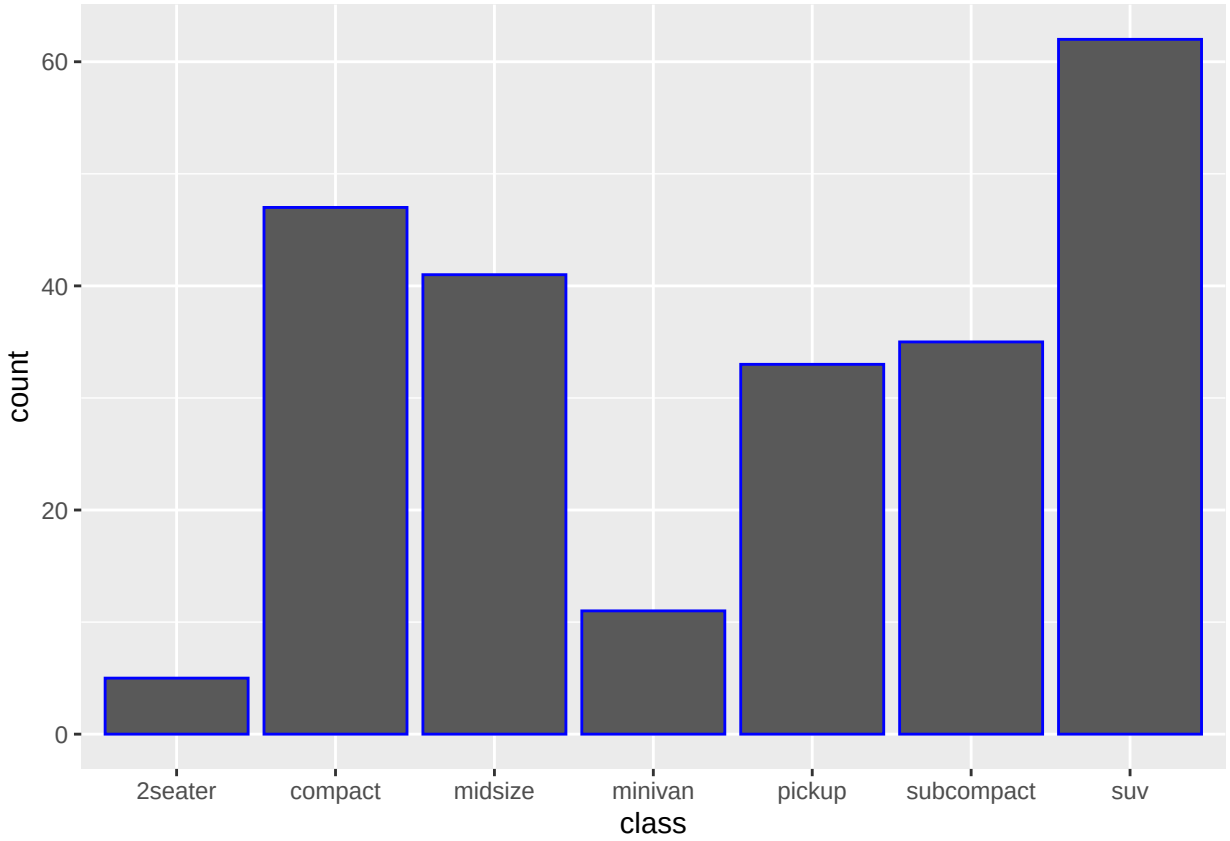
```
ggplot(data=mpg)+geom_point(mapping=aes(x=displ, y=cty, size =year, color=class)) + labs(
x="Displacement", y = "City", size = "Year", title = "Hamid Suha, Kenn Son, Vivian Truong"
) + ylim(c(0,40)) + xlim(c(0,10))
```



- Hint: There are different ways of doing this using the multiple "aesthetics" of geom_point

e)Plot a bar chart of variable class. Hint: use geom_bar().

```
ggplot(data=mpg)+geom_bar(mapping=aes(x=class), color = "blue")
```


60
40
20
0
count
2seater
compact
midsize
minivan
pickup
subcompact
suv
class