Sep_9_ClassNotes

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MPG dataset

1.load tidyverse and mpg datas

```
suppressMessages(library("tidyverse"))
MPG <- mpg
```

2.generate class vs mpg(city and highway) tables

```
class <- MPG$class
classf <- factor(class)
city <- MPG$cty
highway <- MPG$hwy
meancty <- tapply(city,classf,mean)
meanhwy <- tapply(highway,classf,mean)
knitr::kable(cbind(meancty,meanhwy))
```

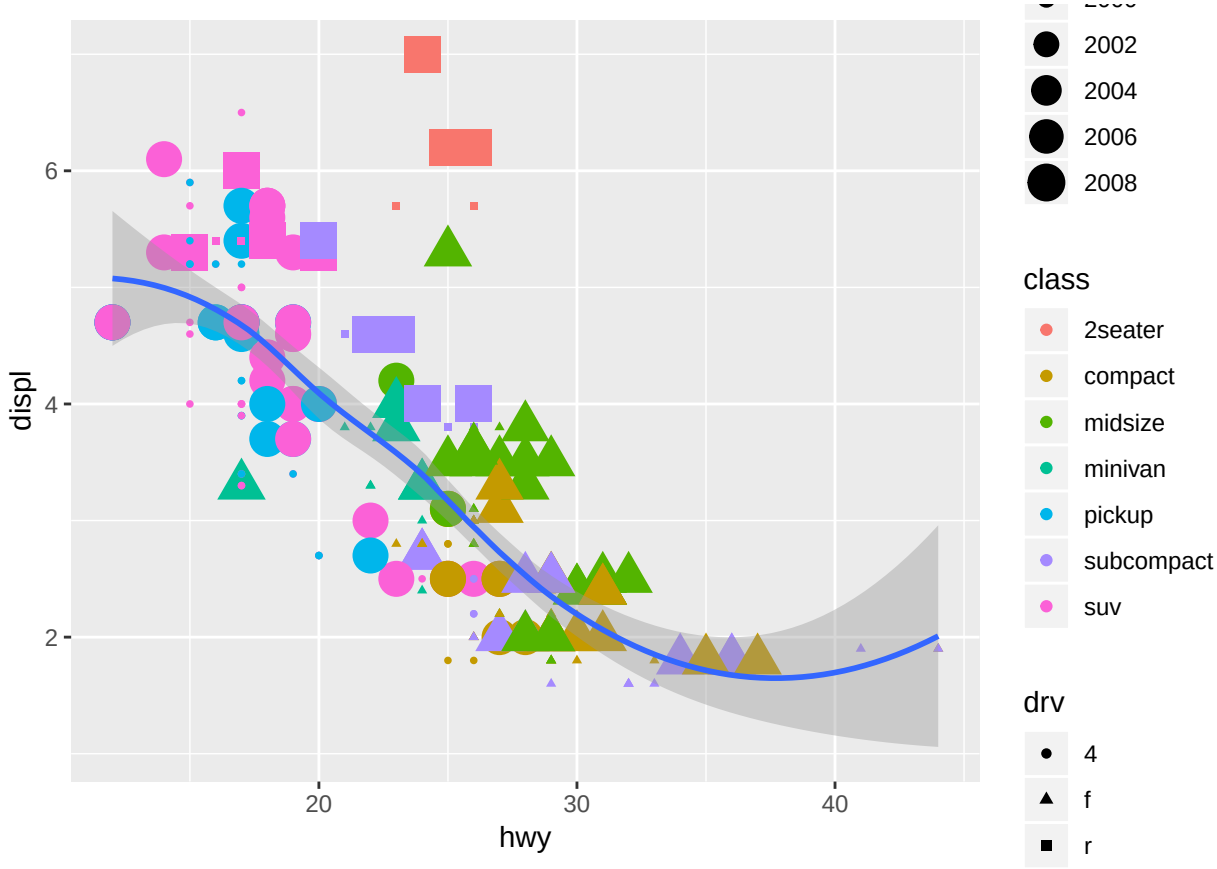
	meancty	meanhwy
2seater	15.40000	24.80000
compact	20.12766	28.29787
midsize	18.75610	27.29268
minivan	15.81818	22.36364
pickup	13.00000	16.87879
subcompact	20.37143	28.14286
suv	13.50000	18.12903

3.generate year vs top3 citymilage its mpg

4.ggplot mpg vs lots

```
ggplot(data = mpg) +
  geom_point(mapping = aes(x = hwy,y = displ, shape = drv, color = class,size = year))+
  geom_smooth(mapping = aes(x = hwy, y = displ))
```

```
## `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```


displ
6
4
2
20
30
40
hwy
2002
2004
2006
2008
class
2seater
compact
midsize
minivan
pickup
subcompact
suv
drv
4
f
r