Chapter 3 Data Visualization

4. Geometric shapes
5. Multiple smoothing lines
6. Statistical transformations

Today we are going to try some more code from Chapter 3 Data Visualization.

To start we will load the tidyverse. Note that `ggplot2` is the first package loaded!

```
library(tidyverse)
```

We will continue to work with the `mpg` dataset that is in the ggplot2 package.

```
mpg
```

Make the scatterplot along with the smoothing line.

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

```
# `geom_smooth()` using method = 'loess' and formula 'y ~ x'
```
Multiple smoothing lines.

```r
ggplot(data = mpg) +
  geom_smooth(mapping = aes(x = displ, y = hwy, linetype = drv))
```

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

```r
ggplot(data = diamonds) +
  geom_bar(mapping = aes(x = cut))
```
Proportions

```r
ggplot(data = diamonds) +
  geom_bar(mapping = aes(x = cut, y = ..prop.., group = 1))
```
Position adjustment

```r
ggplot(data = diamonds) +
  geom_bar(mapping = aes(x = cut, fill = clarity), position = "dodge")
```