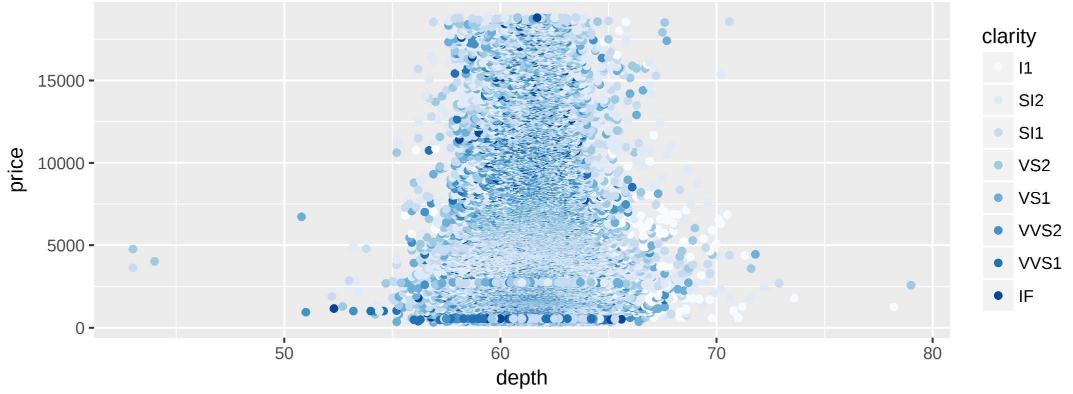
More with ggplot

There are four main objectives with today's handout:

1. Using R Color Brewer to manipulate colors in our standard plots within ggplot
2. Bubble plots
3. Learn how to plot summarized data when the process is not automatic
4. Get practice in identifying the required code needed to produce given plots

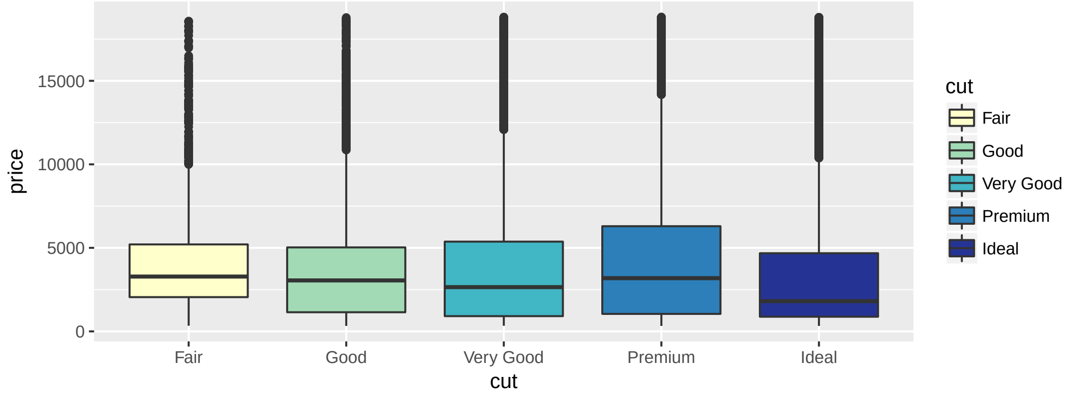
- Some of the plots we have worked with have dealt with raw data. For these plots every geom in the plot represents a single observation of data. The most common raw data plot is a scatterplot.

```
require(ggplot2)
ggplot(data=diamonds)+
  geom_point(aes(x=depth, y=price, color=clarity))+
  scale_color_brewer(palette="Blues")
```



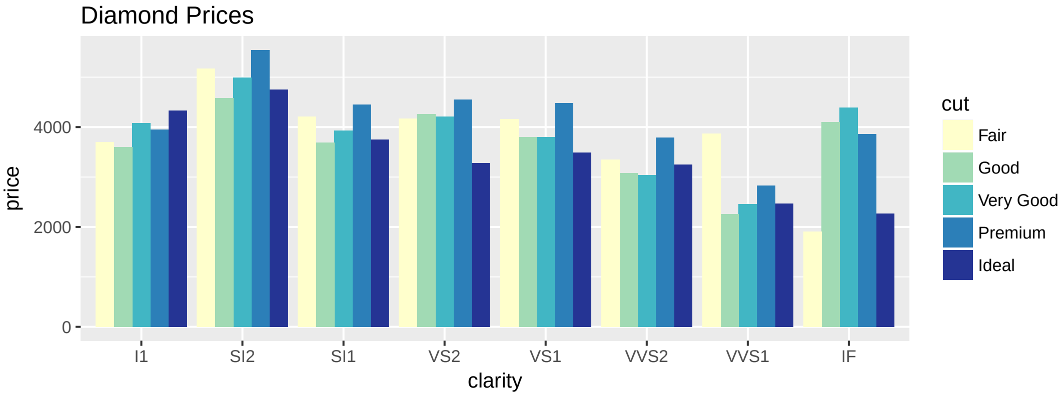
- Other plots we have worked with have summarized the data automatically. That is, it computed summary statistics for us. One example of a graph which uses summarized data automatically is a boxplot.

```
ggplot(data=diamonds)+
  geom_boxplot(aes(x=cut, y=price, fill=cut))+
  scale_fill_brewer(palette="YlGnBu")
```



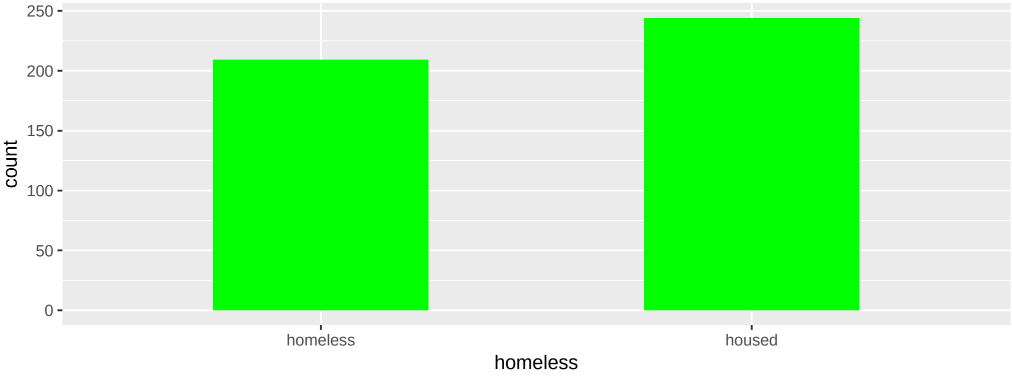
- Other examples of geom's that will automatically give us graphs in summarized forms include: density, smooth, and barplots of frequency.
- Sometimes we want a plot of summarized data instead of raw data, but the process is not automatic.

```
ggplot(data=diamonds)+
  stat_summary(aes(x=clarity, y=price, fill=cut), fun.y=mean, geom="bar", position="dodge")+
  scale_fill_brewer(palette="YlGnBu")+
  ggtitle("Diamond Prices")
```

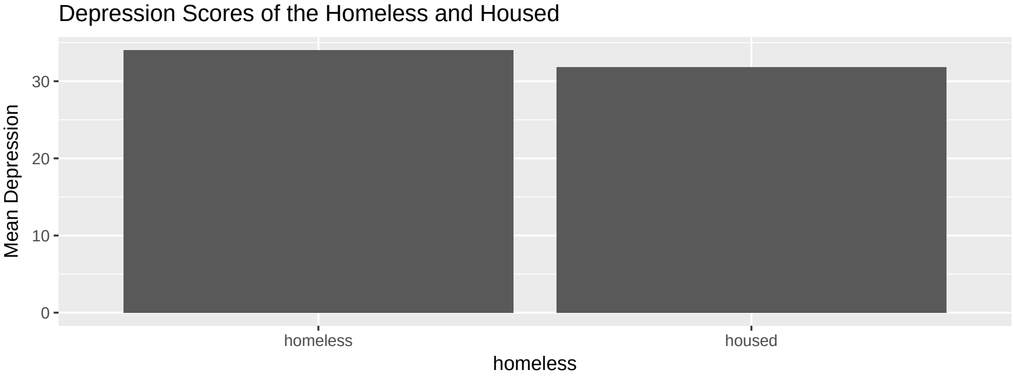


- Your turn

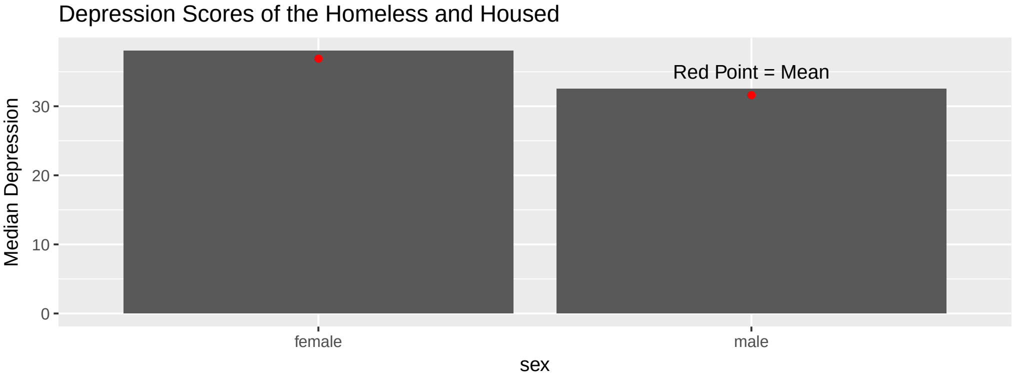
1. What code would produce the following graph?



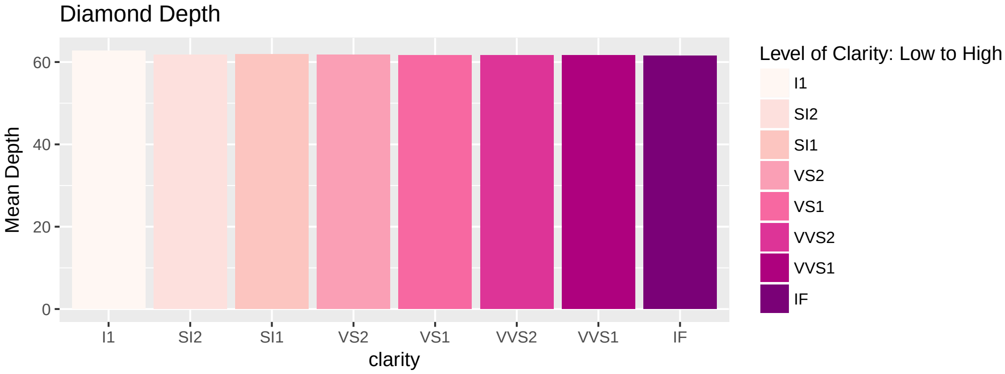
2. What code would produce the following graph?



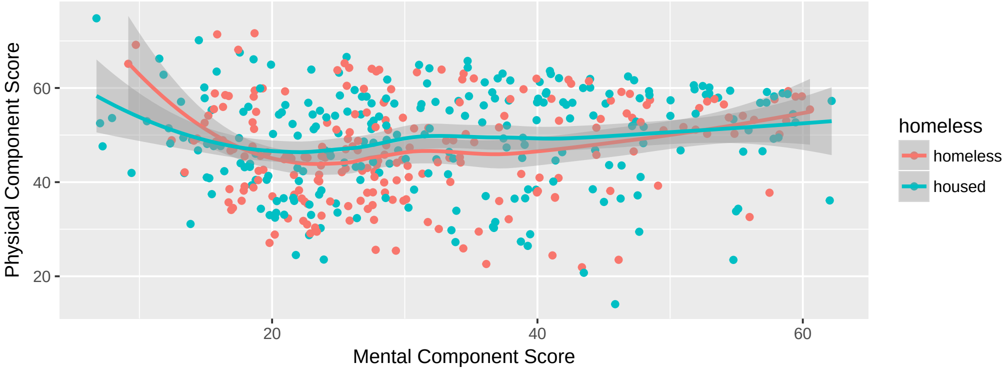
3. What code would produce the following graph?



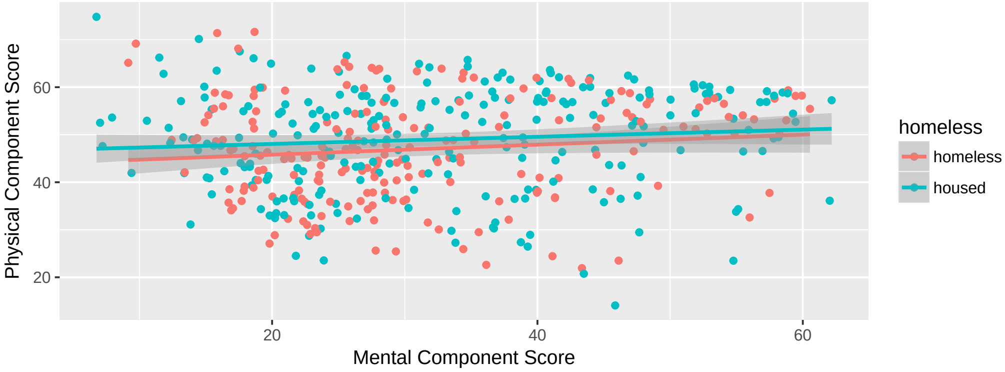
4. What code would produce the following graph?



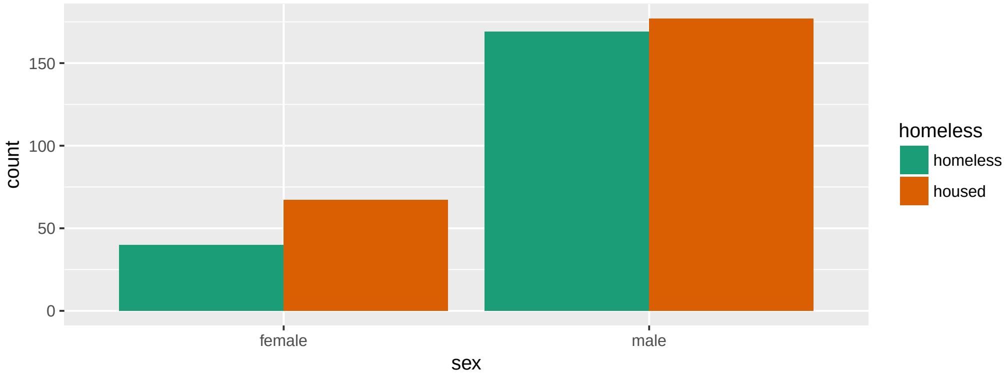
5. What code would produce the following graph?



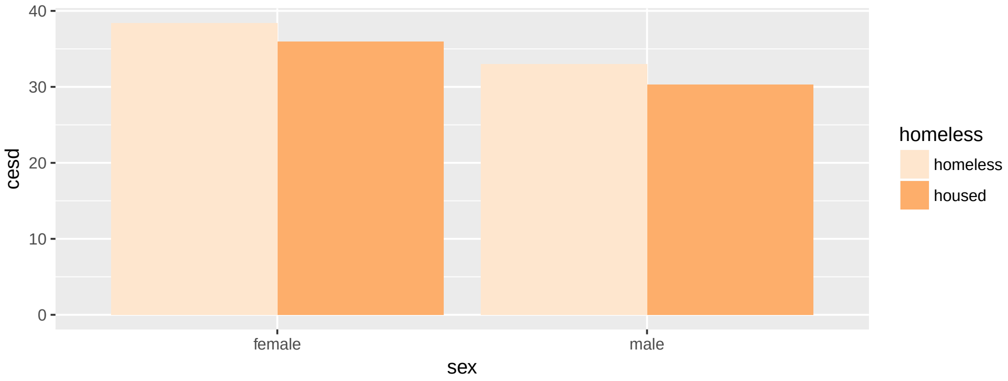
6. What code would produce the following graph? (The following is using the HELPrct data set)



7. What code would produce the following graph?



8. What code would produce the following graph?


cesd
female
male
sex
homeless
homeless
housed