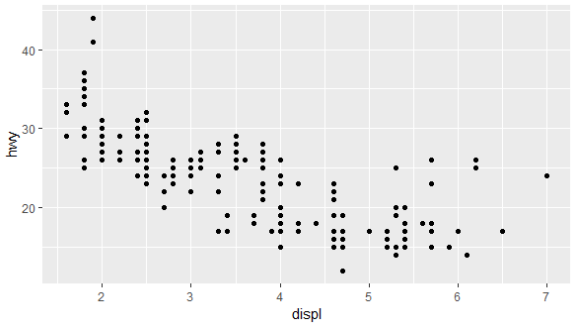
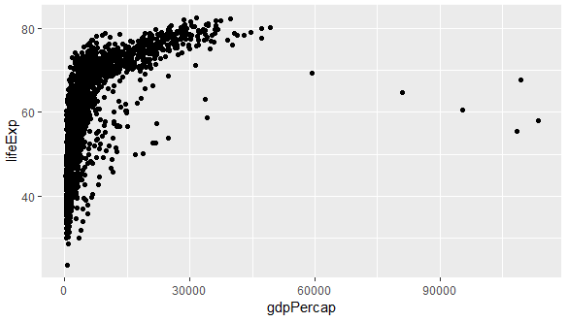
Lab 1 Part 1:

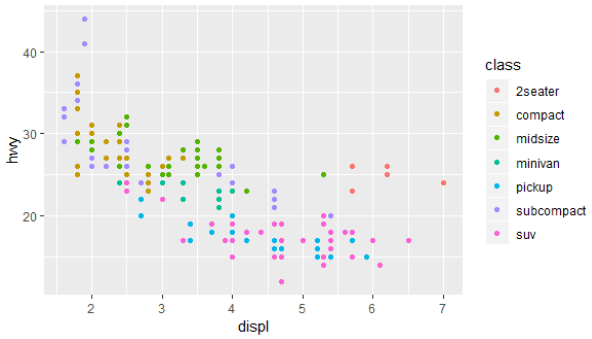
Exercise 1:

The scatter plot captures the general trend that as the engine size increases the fuel efficiency decreases.



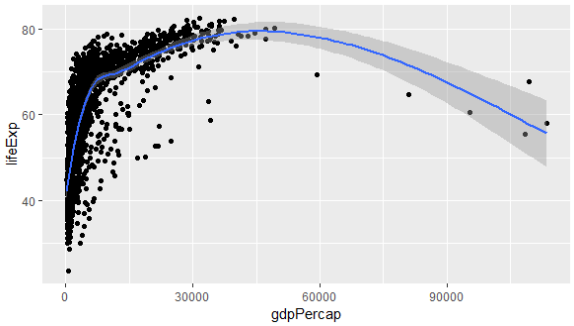


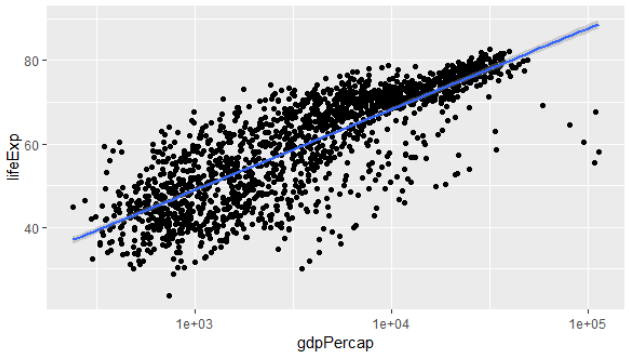
The scatter plot displaying drv vs class isn't very useful because it only displays what type of drivetrain each class can possibly have. This function does not provide any context as to how many of each of type of vehicle is in each category.

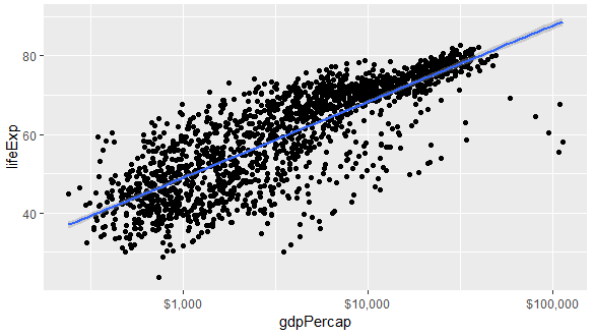


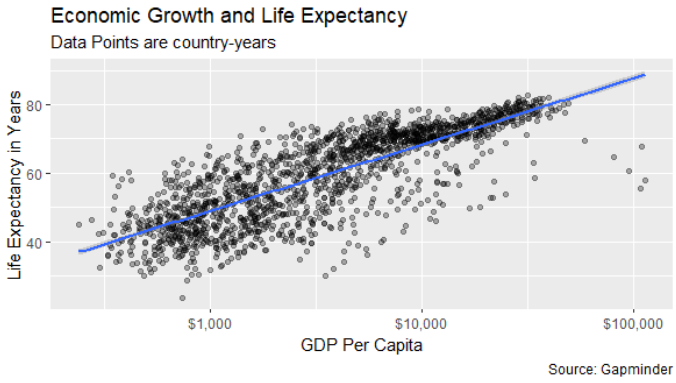
Try it: The scale_x_log10 takes all the x values and scales them to a base of 10. This allows for relative changes to be more apparent accounting for the skew that large absolute values have on the data.

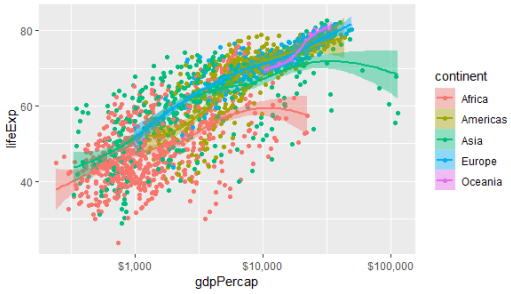
Try it: The dollar (dollar()) command converts a vector of values into currency. You can find other ways of labeling the sclaes by searching through the documentation.











Try it: defining color within the aes call is relating the color of the data points to values in the data set.

Try it: The aesthetics of the chart are such that x values relate to gdp per capita, y values relate to life expectancy and color relates to yellow.

Try it:

Color -> highlights the wanted data points into the specific colors

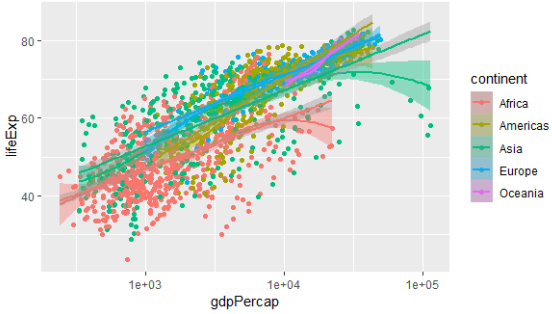
Se -> displays confidence interval around smooth

Size -> how big the shape (rectangle) is supposed to be

Method -> defines the method function

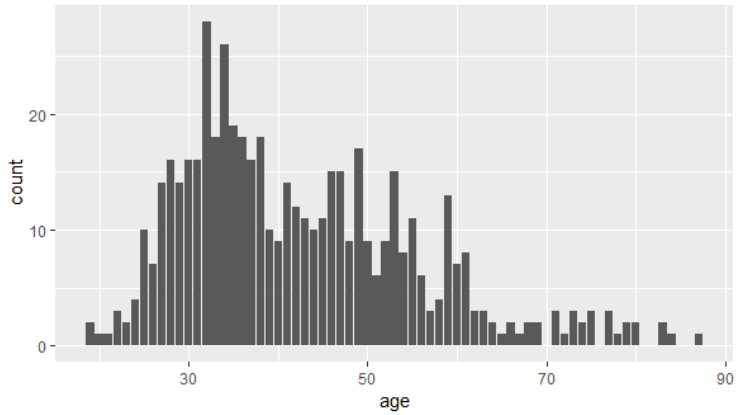
Try it: fill = continent fills in the confidence interval with the relevant color for each continent.

Try it: The following example is hard to read because all the lines overlap each other.



Lab 1 Part 2 Memo:

There are several connections from the data the bank received from their outreach that they can use. When the age of the consumer is graphed according to whether or not the individual subscribed to the product, there is a steep incline in purchases from age 20 to age 35 and a decline in purchases from age 35 onwards; with a peak at age 35. Young Adults between the age of 20 and 35 are the age demographic most likely to be interested in depositing their money into long-term savings accounts as those funds can be used for an emergency payment in the future or can be allocated for retirement, among other things. After the age of 35, long-term savings deposits become more trivial. If the bank would like to increase individuals' deposits in their long-term savings accounts, they should shift their focus and marketing capital on adults between the age of 20 to 35.



There is also a significant relationship between the people that had already purchased mortgages and whether or not they deposited money into long-term savings accounts. Those that had purchased mortgages are very unlikely to put money into a long-term savings account because they may not have had enough money to take advantage of both. Given this information, the bank should market their long-term savings accounts to individuals that haven't purchased mortgages or invested heavily in other types of loans.