**Project 1 Q2 Visualization Steps**

Part 1: To identify the top 5 highest-sentencing offenses in Texas, I first converted all starting data frame values to float to get as accurate of a number as possible. I then used the loc function to create a table of the offense, sentence in years and the assigned offense category number for each of the 45 offense categories. With every category, I used the mean function on the sentence years column to find the average sentence of each offense. I rounded these results to one decimal place. Then, I created a final data frame with all 45 offenses with their respective average sentence and put them in descending order. From here, I pulled out the top 5 in this final data frame (murder, pollution, kidnapping, organized crime, sexual assault) and displayed them in a bar graph.

Part 2: To look at murder sentencing in 5 major counties containing major cities in Texas, I first created a data frame with the county, sentence (years), and offense category cloumns. Then, I used the loc function on the county column to create a table for each (Harris, Dallas, Terrant, Bexar, Travis). Once I had a table for all offenses in a county, I used loc again on the offense column to obtain only the murder offenses for that county. I took the mean of the sentence column to find the average sentence for murder in each of the five counties. Finally, I created a double bar graph that showed the average murder sentence of each county next to the state average murder sentence. This made it easy to see which counties had an above average murder sentence rate, and which ones were below the state average.