**Module 4 Challenge**

**Summary of Analysis**

In this analysis we looked at data of various schools in a school district with information on their size and budget as well as the students that attended these schools and their academic performance. To perform this analysis I first had to start by merging the 2 datasets together so we could draw comparison between the school macro data and how the students performed. By utilizing the “group by” feature in pandas I was able to collect summary statistics for both the schools and the students. In this analysis, I looked at an overall summary of the students performance, student performance by school, student performance by school and grade, student performance by school spending, student performance by school size, and finally performance by school type.

**Conclusions from Analysis**

1. Charter schools have higher success rates with their students across math and reading with almost 40% more students passing both subjects at a charter school.
   1. A screenshot of a credit score

      Description automatically generated
2. Large schools significantly reduce the success rate of a students performance over small or medium sized schools. Small and medium sized schools both have an overall passing rate around 90%, but this drops all the way to 60% for large schools.
   1. A screenshot of a score

      Description automatically generated
3. Surprisingly, there is a negative correlation with spending per student and student performance. In this dataset we see that the more money a school has per student the lower the performance on average those students have.
   1. A screenshot of a graph

      Description automatically generated