**Module 4 – Pandas Challenge Analysis**

**Summary of the Analysis:**

**School Scores and passing percentages:**

1. Charter schools are better performing schools academically even though their spending per student is lower that big sized District schools. Charter school student body strength is usually less than 2000 students.
2. District schools that have double the number of students than Charter schools, even with more than double the budget of their small and medium size counterparts, still have students with low overall pass percentage and low math scores.
3. District schools have lower math score and still lower passing percentage for Maths in general.
4. Math score of students vary across different schools. Though they are consistent within a school among different grades of same school.
5. Reading Score of students across grades and different schools are very consistent. No big variations are noticed here.

**School Size:**

1. Small (<1000 students) and Medium (1000 – 2000 students) size schools perform significantly better academically than large size (2000 – 5000 students) schools.

**School Type:**

1. Average Reading Scores for both Charter and District schools are in similar range. However, the passing percentage in Reading is higher for Charter students.
2. District school students have lower Math scores and much lower passing percentage in Math (67 %) compared to their counterpart Charter School students (94 %).
3. Charter school students have higher overall passing percentage (90 %) compared to District school students (53 %).

**Conclusions**:

1. Higher spending per student has inverse relationship with scores and overall pass percentage of students. So, allocating more financial resources might not automatically improve academic results of a school.
2. Size (number of students) and Type of the school has a direct impact on scores and passing percentage of students. Small to Medium size school show better academic results compared to large size schools. The maximum size of the school (number of students per school) should not be more than 2000 for good academic development of students.

Small to Medium size Charter schools show best math and reading scores and overall passing percentage for their students.