

Written Report Module 4 Challenge

Based on the provided data, we are able to draw conclusions from the DataFrames that were calculated below:

- District Summary
- School Summary
- Highest-Performing Schools (by % Overall Passing)
- Lowest-Performing Schools (by % Overall Passing)
- Math Scores by Grade
- Reading Scores by Grade
- Scores by School Spending
- Scores by School Size
- Scores by School Type

District Summary

I began by calculating the school district's key metrics which included the following:

- Total number of unique schools
- Total students
- Total budget
- Average math score
- Average reading score
- % passing math (the percentage of students who passed math)
- % passing reading (the percentage of students who passed reading)
- % overall passing (the percentage of students who passed math AND reading)

After creating the District Summary, with the fields mentioned above, I was able to conclude that of the 15 total schools and ~ 40,000 students, Reading was a higher scoring subject than Math. 85.8% of students had passed reading, whereas 74.98% of students had passed math. Overall, only 65% of students within the district had passed both math and reading.

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School Summary

I then created a DataFrame that summarizes the key metrics about each (15) school, displaying the following fields:

- School name
- School type
- Total students
- Total school budget
- Per student budget
- Average math score
- Average reading score
- % passing math (the percentage of students who passed math)
- % passing reading (the percentage of students who passed reading)
- % overall passing (the percentage of students who passed math AND reading)

After creating the School Summary, with the fields mentioned above, I was able to conclude that surprisingly, schools with a higher 'Total School Budget', had a lower '% Overall Passing Rate'. 7 out of 15 schools with budgets of over 1.7 million, had an overall passing rate of about 50%. Whereas 8 out of 15 schools with budgets of 1.3 million and below, had an overall passing rate of about 90%. However, based on the data, it is evident that schools with a higher overall passing rate, did have less students in comparison to schools with lower percentages of overall passing rates. It is possible that the bigger the student body, the less time is being spent with students individually due to factors that could possibly include lack of resources (computers, books, etc.) as well as a limited amount of teachers.