**Student Performance Analysis**

## Aim

How the student's performance (test scores) is affected by other variables such as Gender, Ethnicity, Parental level of education, Lunch and Test preparation course.?

## Content

This data set consists of the marks secured by the students in various subjects.

Gender: Sex of students -> (Male/female)

Race/Ethnicity: Ethnicity of students -> (Group A, B, C, D, E)

Parental Level Of Education: Parents' final education (Bachelor's degree, some college, Master's degree, Associate's degree, High school)

Lunch: having lunch before test (standard or free/reduced)

Test Preparation Course: Complete or not Complete before test

Math score

Reading score

Writing score

* Note: The metric used for measuring performance is:
* Categories of marks
* Outstanding-90+
* Above Average-70-90
* Average-50-70
* Below Average-less than 50
* Analysis Findings
  + There are 3 students scoring 100% marks in all three subjects.
  + The average score of each student in each of the three subjects is 67.8.
  + There are 50 students who have scored above 90% in all the three subjects (out of 1000) which shows that the school is above average and adept for analysis.
  + In the factors the preparation is considered a strong factor as per the chart. Only the outstanding (scoring 90% above) have students who have completed the preparation.
  + Group C category students are in the majority and the maximum number of students who scored more than 90%.
  + The female students perform better than male students as their sum of scores 53% which shows that thos factor can be weak.
  + The percentage of sum of average scores for students who have taken standard lunch as opposed to reduced is 67% which clearly shows that students who have standard lunch perform better than elsewise.
  + Parental Education can be considered as a strong factor as the average marks per student whose parents are either Graduate and Masters is above 70 which is significantly greater than the others showing a strong relationship in chart.
* Conclusion
  + In the analysis some factors such as Parental Education, Lunch Before, Preparation are some of the strong factors and the school can prioritize meals and bonus preparation to boost the performance of the students.