-- Students Habit Vs Academic Performance

-- Creating The Table

DROP TABLE IF EXISTS My\_Students\_Habitz;

CREATE TABLE My\_Students\_Habitz (

student\_id INT PRIMARY KEY,

age INT,

gender VARCHAR (15),

study\_hours\_per\_day FLOAT,

social\_media\_hours FLOAT,

netflix\_hours FLOAT,

part\_time\_job VARCHAR (10),

attendance\_percentage FLOAT,

sleep\_hours FLOAT,

diet\_quality VARCHAR (15),

exercise\_frequency INT,

parental\_education\_level VARCHAR (20),

internet\_quality VARCHAR (20),

mental\_health\_rating INT,

extracurricular\_participation VARCHAR (5),

exam\_score FLOAT

)

;

SELECT \* FROM My\_Students\_Habitz;

SELECT COUNT(\*) FROM My\_Students\_Habitz;

-- Check for Null values (Data cleaning)

SELECT \* FROM My\_Students\_Habitz

WHERE student\_id IS NULL

OR age IS NULL

OR gender IS NULL

OR study\_hours\_per\_day IS NULL

OR social\_media\_hours IS NULL

OR netflix\_hours IS NULL

OR part\_time\_job IS NULL

OR attendance\_percentage IS NULL

OR sleep\_hours IS NULL

OR diet\_quality IS NULL

OR exercise\_frequency IS NULL

OR parental\_education\_level IS NULL

OR internet\_quality IS NULL

OR mental\_health\_rating IS NULL

OR extracurricular\_participation IS NULL

OR exam\_score IS NULL;

-- DATA EXPLORATION

-- Total number of students involved

SELECT COUNT(DISTINCT student\_id) AS "NUMBER OF STUDENTS" FROM My\_Students\_Habitz;

-- Diet Quality types

SELECT DISTINCT diet\_quality AS "DIET QUALITY TYPES" FROM My\_Students\_Habitz;

-- Minimum Exam Score

SELECT MIN(exam\_score) AS "MINIMUM EXAM SCORE" FROM My\_Students\_Habitz;

-- Maximum Exam Score

SELECT MAX(exam\_score) AS "HIGHEST EXAM SCORE" FROM My\_Students\_Habitz;

-- \* PERFORMING DATA ANALYSIS WITH KEY BUSINESS QUESTIONS AND ANSWERS

-- Q1. Write an SQL query to find the average age of the students

-- Q2. Write an SQL query to find the unique number of students with Good diet quality

-- Q3. Write an SQL query to find the average age of the students with a Part Time Job

-- Q4. Write an SQL query to find out number of students who engage in Extracurricular Participation

-- Q5. Write an SQL query to find the average sleep hours for the Male gender

-- Q6. Write an SQL query to find the unique number of students with Poor Internet Quality

-- Q7. Write an SQL query to find the number of students with the lowest exam score

-- Q8. Write an SQL query to find the number of students with the highest exam score

-- Q9. Write an SQL query to find the number of students with Mental Health Rating greater than the average

-- Q10. Write an SQL query to find the number of students who sleep more than the average sleep hours

-- Q11. Write an SQL query to find the average age of genders with high attendance rate and high exam scores

-- Q12. Write an SQL query to find the number of non-performing students

-- Q13. Write an SQL query to find out students who performed well in their exams even with poor Internet Quality

-- Q14. Write an SQL query to estimate student academic status

-- Q1. Write an SQL query to find the average age of the students

SELECT ROUND (AVG(age), 2) AS "Average Age" FROM My\_Students\_Habitz;

-- Q2. Write an SQL query to find the unique number of students with Good diet quality

SELECT COUNT(DISTINCT student\_id) AS "Students with Good Diet Quality" FROM My\_Students\_Habitz

WHERE diet\_quality = 'Good';

-- Q3. Write an SQL query to find the average age of the students with a Part Time Job

SELECT ROUND(AVG(age), 2) AS "Avg. Age of PTJ Students" FROM My\_Students\_Habitz

WHERE part\_time\_job = 'Yes';

-- Q4. Write an SQL query to find out number of students who engage in Extracurricular Participation

SELECT COUNT(student\_id) AS "Extracurricular Students" FROM My\_Students\_Habitz

WHERE extracurricular\_participation = 'Yes';

-- Q5. Write an SQL query to find the average sleep hours for the Male gender

SELECT gender, AVG(sleep\_hours) AS "Average Male Sleep Hours" FROM My\_Students\_Habitz

WHERE gender = 'Male'

GROUP BY gender;

-- Q6. Write an SQL query to find the unique number of students with Poor Internet Quality

SELECT COUNT(DISTINCT student\_id) AS "No. of Unique Students with Poor Internet Quality" FROM My\_Students\_Habitz

WHERE internet\_quality IN ('Poor');

-- Q7. Write an SQL query to find the number of students with the lowest exam score

SELECT COUNT(student\_id) AS "No. of Poor Students" FROM My\_Students\_Habitz

WHERE exam\_score =

(SELECT MIN(exam\_score) FROM My\_Students\_Habitz)

;

-- Q8. Write an SQL query to find the number of students with the highest exam score

SELECT COUNT(student\_id) AS "No. of Excellent Students" FROM My\_Students\_Habitz

WHERE exam\_score =

(SELECT MAX(exam\_score) FROM My\_Students\_Habitz)

;

-- Q9. Write an SQL query to find the number of students with Mental Health Rating greater than the average

SELECT COUNT(student\_id) AS "High Mental Health Stats" FROM My\_Students\_Habitz

WHERE mental\_health\_rating >

(SELECT ROUND(AVG(mental\_health\_rating), 2) FROM My\_Students\_Habitz);

-- Q10. Write an SQL query to find the number of students who sleep more than the average sleep hours

SELECT COUNT(student\_id) AS "High Sleeping Students" FROM My\_Students\_Habitz

WHERE sleep\_hours >

(SELECT AVG(sleep\_hours) FROM My\_Students\_Habitz);

-- Q11. Write an SQL query to find the average age of genders with high attendance rate and high exam scores

SELECT gender, ROUND(AVG(age), 3) AS "Average age of good students" FROM My\_Students\_Habitz

WHERE attendance\_percentage

BETWEEN 90 AND 100

AND exam\_score BETWEEN 80 AND 100

GROUP BY gender;

-- Q12. Write an SQL query to find the number of non-performing students

SELECT COUNT(student\_id) AS "Non-performing students", gender FROM My\_Students\_Habitz

WHERE social\_media\_hours > 3

AND netflix\_hours > 3.5

AND study\_hours\_per\_day < 3.5

AND sleep\_hours > 5.5

AND exam\_score < 50

AND extracurricular\_participation = 'No'

GROUP BY gender;

-- Q13. Write an SQL query to find out students who performed well in their exams even with poor Internet Quality

SELECT student\_id, internet\_quality, exam\_score FROM My\_Students\_Habitz

WHERE exam\_score >= 80

AND internet\_quality IN ('Poor')

;

-- Q14. Write an SQL query to estimate student academic status

SELECT age, exam\_score,

CASE

WHEN exam\_score >= 70 THEN 'Good Student'

WHEN exam\_score BETWEEN 50 AND 69.9 THEN 'Average Student'

WHEN exam\_score <= 49.9 THEN 'Poor Student'

END AS Student\_Status

FROM My\_Students\_Habitz;

-- END OF PROJECT

**Reports and Conclusions**

* Introduction – This project is essentially set up to observe the trends on students’ academic performances vis a vis their social and work-related lifestyle. It is important to understand how students of different ages and gender effectively combine academics, work and social activities; and how these impacted on their academic output while facing other debilitating factors such as diet quality and Internet quality.
* Problem Statement – The project basically focused on performing exploratory data analysis (EDA) with the dataset. However, key questions from the dataset needed clarifications. Such questions included: (1) Finding the number of non-performing students based on their activities. (2) Finding the number of students who participated in extracurricular activities. (3) Finding the number of students with the highest/lowest exam scores. (4) Finding the average age of students with part-time jobs etc.
* Data Overview – The dataset for this project was obtained from Kaggle.com – a repository of datasets for project analysis and insights generation. For this analysis, no major assumptions were made.
* Methodology – The dataset was essentially cleaned to ensure the various data were valid, accurate and without duplicates.
* Conclusions – The analysis offered the opportunity to discover some interesting insights which are vital in understanding how social media activities impact on students’ academic performances; how parental academic/educational backgrounds reflect on their children/wards; how attendance percentages impacted on academic performances and much more.
* Recommendations – Quite a number of recommendations can be deduced from this analysis. Some of these include: (a) Ensuring that students have good quality Internet access to enhance study and research work which will impact positively on their academic pursuit (b) Ensuring that students have good diets (3) Discouraging excess hours on social media activities, amongst other factors.