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SQL Queries

1. Find the average grade of all students across all courses:

SELECT AVG(grade) AS avg\_grade

FROM Enrollments;

1. List the names of students along with the courses they are enrolled in (include course name):

SELECT Students.name, Courses.course\_name

FROM Enrollments

JOIN Students ON Enrollments.student\_id = Students.student\_id

JOIN Courses ON Enrollments.course\_id = Courses.course\_id;

1. Count the number of students in each grade level:

SELECT grade\_level, COUNT(\*) AS student\_count

FROM Students

GROUP BY grade\_level;

1. Find the maximum grade achieved in each course:

SELECT Courses.course\_name, MAX(Enrollments.grade) AS max\_grade

FROM Enrollments

JOIN Courses ON Enrollments.course\_id = Courses.course\_id

GROUP BY Courses.course\_name;

1. Find the average grade of students who are in grade level 3:

SELECT AVG(Enrollments.grade) AS avg\_grade\_level\_3

FROM Enrollments

JOIN Students ON Enrollments.student\_id = Students.student\_id

WHERE Students.grade\_level = 3;

1. Get a list of students, their enrolled courses, and the credit hours for each course:

SELECT Students.name AS student\_name, Courses.course\_name, Courses.credits

FROM Enrollments

JOIN Students ON Enrollments.student\_id = Students.student\_id

JOIN Courses ON Enrollments.course\_id = Courses.course\_id;

1. Find all courses that have an average grade greater than 3.0:

SELECT Courses.course\_name, AVG(Enrollments.grade) AS avg\_grade

FROM Enrollments

JOIN Courses ON Enrollments.course\_id = Courses.course\_id

GROUP BY Courses.course\_name

HAVING AVG(Enrollments.grade) > 3.0;

1. Find students who have not received a grade of 4.0 in any course:

SELECT DISTINCT Students.name AS student\_name

FROM Students

WHERE Students.student\_id NOT IN (

SELECT Enrollments.student\_id

FROM Enrollments

WHERE Enrollments.grade = 4.0

);

1. Find the names of students whose average grade is greater than the average grade of all students:

SELECT s.name

FROM Students s

JOIN Enrollments e ON s.student\_id = e.student\_id

GROUP BY s.name

HAVING AVG(e.grade) > (SELECT AVG(grade) FROM Enrollments);

1. Display each student's name, the total number of courses they are enrolled in, and their average grade:

SELECT s.name,

COUNT(e.course\_id) AS total\_courses,

AVG(e.grade) AS average\_grade

FROM Students s

JOIN Enrollments e ON s.student\_id = e.student\_id

GROUP BY s.name;