1. **Write a query to find the students who have the highest grade in a specific course.**

SELECT student\_id

FROM Grades

WHERE course\_id = <specific\_course\_id>

ORDER BY grade DESC

LIMIT 1;

1. **Write a query to find the teachers who are teaching the maximum number of courses.**

SELECT teacher\_id, COUNT(course\_id) as course\_count

FROM Courses

GROUP BY teacher\_id

ORDER BY course\_count DESC

LIMIT 1;

1. **Write a query to find the courses that have not reached the maximum number of students.**

SELECT c.course\_id, c.name

FROM Courses c

LEFT JOIN Grades g ON c.course\_id = g.course\_id

GROUP BY c.course\_id

HAVING COUNT(g.student\_id) < c.maximum\_students;

1. **Write a query to find the average grade for each course.**

SELECT course\_id, AVG(CAST(grade AS DECIMAL(3, 2))) as average\_grade

FROM Grades

GROUP BY course\_id;

1. **Write a query to find the students who have failed a course.**

SELECT student\_id, course\_id

FROM Grades

WHERE grade = 'F';