**SQL QUERIES ASSIGNMENT**

**2437049 SAMRIDHI**

**1. Average Grade of All Students Across All Courses**

SELECT AVG(grade) AS average\_grade

FROM Enrollments;

| **average\_grade** |
| --- |
| 3.2 |

**2. List Names of Students with Courses**

SELECT S.name AS student\_name, C.course\_name

FROM Students S

JOIN Enrollments E ON S.student\_id = E.student\_id

JOIN Courses C ON E.course\_id = C.course\_id;

| **student\_name** | **course\_name** |
| --- | --- |
| Alice | Math |
| Alice | Science |
| Bob | Math |
| Bob | History |
| Charlie | Science |
| Charlie | Art |
| Diana | Math |
| Diana | History |
| Ethan | Science |
| Ethan | Art |

**3. Count the Number of Students in Each Grade Level**

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

FROM Students

GROUP BY grade\_level;

|  |  |
| --- | --- |
| **grade\_level** | **student\_count** |
| 3 | 3 |
| 4 | 2 |

**4. Maximum Grade Achieved in Each Course**

SELECT C.course\_name, MAX(E.grade) AS max\_grade

FROM Courses C

JOIN Enrollments E ON C.course\_id = E.course\_id

GROUP BY C.course\_name;

|  |  |
| --- | --- |
| **course\_name** | **max\_grade** |
| Art | 3.5 |
| History | 4 |
| Math | 3.5 |
| Science | 4 |

**5. Average Grade of Students in Grade Level 3**

SELECT AVG(E.grade) AS average\_grade

FROM Enrollments E

JOIN Students S ON E.student\_id = S.student\_id

WHERE S.grade\_level = 3;

| **average\_grade** |
| --- |
| 3.1666666666666665 |

**6. List of Students, Their Enrolled Courses, and Credit Hours**

SELECT S.name AS student\_name, C.course\_name, C.credits

FROM Students S

JOIN Enrollments E ON S.student\_id = E.student\_id

JOIN Courses C ON E.course\_id = C.course\_id;

| **student\_name** | **course\_name** | **credits** |
| --- | --- | --- |
| Alice | Math | 3 |
| Alice | Science | 4 |
| Bob | Math | 3 |
| Bob | History | 3 |
| Charlie | Science | 4 |
| Charlie | Art | 2 |
| Diana | Math | 3 |
| Diana | History | 3 |
| Ethan | Science | 4 |
| Ethan | Art | 2 |

**7. Courses with an Average Grade Greater than 3.0**

SELECT C.course\_name

FROM Courses C

JOIN Enrollments E ON C.course\_id = E.course\_id

GROUP BY C.course\_name

HAVING AVG(E.grade) > 3.0;

|  |
| --- |
| **course\_name** |
| History |
| Math |
| Science |

**8. Students Who Have Not Received a Grade of 4.0 in Any Course**

SELECT S.name

FROM Students S

WHERE S.student\_id NOT IN (

SELECT E.student\_id

FROM Enrollments E

WHERE E.grade = 4.0

);

|  |
| --- |
| **name** |
| Bob |
| Charlie |
| Ethan |

**9. Names of Students Whose Average Grade is Greater than All Students' Average**

SELECT S.name

FROM Students S

JOIN Enrollments E ON S.student\_id = E.student\_id

GROUP BY S.student\_id

HAVING AVG(E.grade) > (

SELECT AVG(grade) FROM Enrollments

);

|  |
| --- |
| **name** |
| Alice |
| Diana |
| Ethan |

**10. Each Student's Name, Total Courses Enrolled, and Average Grade**

SELECT S.name AS student\_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.student\_id;

| **student\_name** | **total\_courses** | **average\_grade** |
| --- | --- | --- |
| Alice | 2 | 3.75 |
| Bob | 2 | 2.75 |
| Charlie | 2 | 2.5 |
| Diana | 2 | 3.75 |
| Ethan | 2 | 3.25 |