Task: Database Assignment

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Class: ITE-M2-G9

1. Retrieve all students who enrolled in a specific course.

```
1        -- 1. Retrieve all students who enrolled in a specific course
2  •     SELECT s.student_id, s.first_name, s.last_name, c.course_code
3        FROM students s
4        JOIN enrollments e ON s.student_id = e.student_id
5        JOIN courses c ON e.course_id = c.course_id
6        WHERE c.course_code = 'CS101';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

student_id	first_name	last_name	course_code
1	Leav	Sovatanak	CS101
2	Chan	Chav	CS101

2. Find all faculty members in a particular department

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10       -- 2. Find all faculty members in a particular department (e.g., 'IT Engineering')
11 •     SELECT f.faculty_id, f.first_name, f.last_name, d.name AS department
12       FROM faculty f
13       JOIN departments d ON f.department_id = d.department_id
14       WHERE d.name = 'IT Engineering';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

faculty_id	first_name	last_name	department
1	Vann	Da	IT engineering

3. List all courses a particular student is enrolled in.

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21      -- 3. List all courses a particular student is enrolled in (e.g., student_id = 1)
22  ●   SELECT c.course_code, c.course_name, s.first_name, s.last_name
23      FROM courses c
24      JOIN enrollments e ON c.course_id = e.course_id
25      JOIN students s ON e.student_id = s.student_id
26      WHERE s.student_id = 1;
27      -- This query shows the courses a specific student is enrolled in using JOINs
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

course_code	course_name	first_name	last_name
CS101	Computer fundametal	Leav	Sovatanak
BIO302	Biology I	Leav	Sovatanak

4. Retrieve students who have not enrolled in any course

```
23
24
25      -- 4. Retrieve students who have not enrolled in any course
26  ●   SELECT s.student_id, s.first_name, s.last_name
27      FROM students s
28      LEFT JOIN enrollments e ON s.student_id = e.student_id
29      WHERE e.enrollment_id IS NULL;
30      -- We use a LEFT JOIN to include all students, and filter those who have no matching enrollment records
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

student_id	first_name	last_name
4	Van	Chesda

5. Find the average grade of students in a specific course

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33      -- 5. Find the average grade of students in a specific course (e.g., 'CS101')
34  ●   SELECT c.course_code, AVG(e.grade) AS average_grade
35      FROM courses c
36      JOIN enrollments e ON c.course_id = e.course_id
37      WHERE c.course_code = 'CS101'
38      GROUP BY c.course_code;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

course_code	average_grade
CS101	3.45000