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Class:ITE G9A3

- Er diagram (image or PDF)

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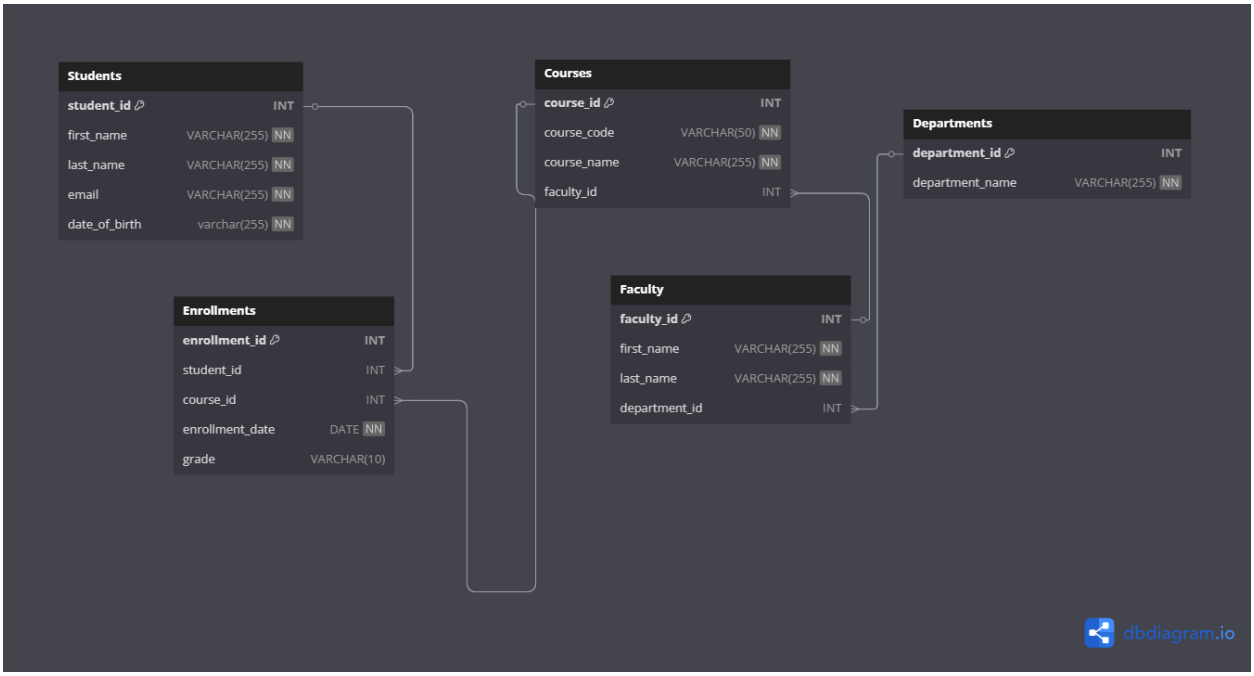


-SQL file create table and insert statement file

insert and add table.sql

-sql queries with explanation

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

```sql
-- 1. Retrieve all students who enrolled in a specific course.
-- To retrieve all students enrolled in a specific course (e.g., course with code "CS101"):
SELECT
    s.first_name AS student_first_name,s.last_name AS student_last_name,
    c.course_code,c.course_name,e.enrollment_date,e.grade
FROM Enrollments e
JOIN Students s ON e.student_id = s.student_id
JOIN Courses c ON e.course_id = c.course_id
WHERE c.course_code = 'CS101';
```

2. Find all faculty members in a particular department.

```sql
-- 2. Find all faculty members in a particular department.
-- To find all faculty members in a specific department (e.g., "Computer Science"):
SELECT
    f.first_name AS faculty_first_name,
    f.last_name AS faculty_last_name,
    d.department_name
FROM Faculty f
JOIN Departments d ON f.department_id = d.department_id
WHERE d.department_name = 'Computer Science';
```

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

```sql
-- 3. List all courses a particular student is enrolled in.
-- To list all courses a particular student is enrolled in (e.g., student with student_id 1):

SELECT
    c.course_code,
    c.course_name,
    e.enrollment_date,
    e.grade
FROM Enrollments e
JOIN Courses c ON e.course_id = c.course_id
WHERE e.student_id = 1;
```

4. Retrieve students who have not enrolled in any course.

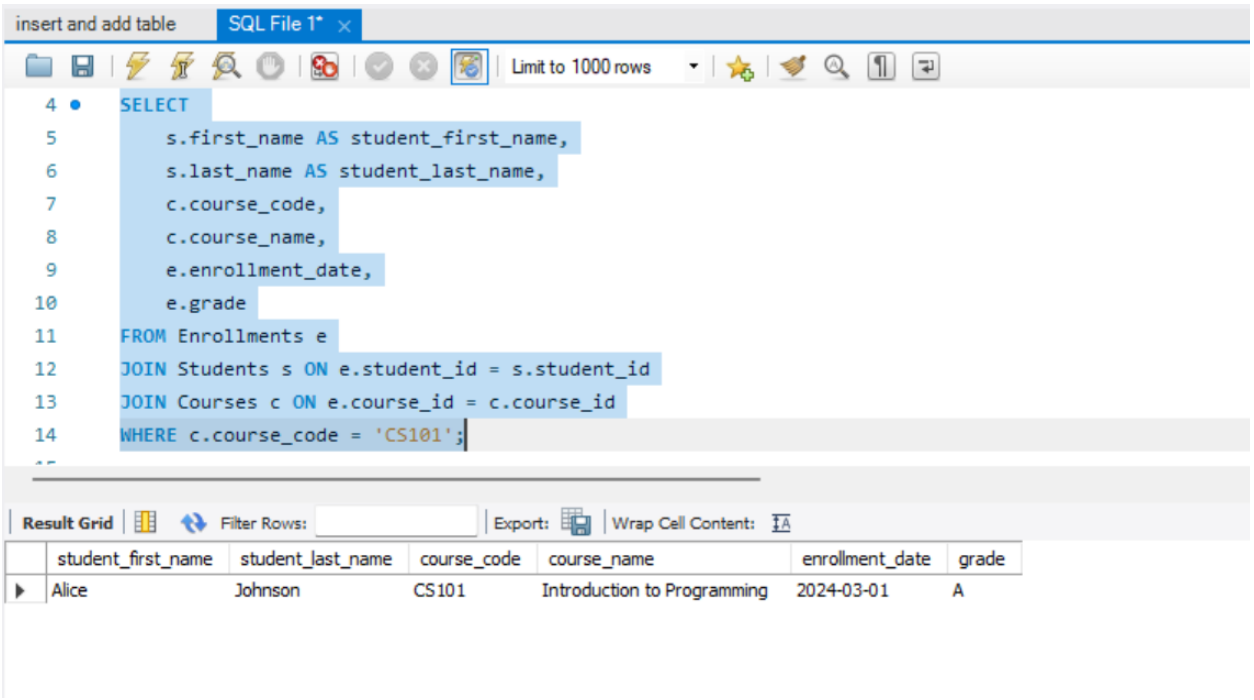
```sql
-- 4. Retrieve students who have not enrolled in any course.
-- To retrieve all students who have not enrolled in any course:

SELECT
    s.first_name AS student_first_name,
    s.last_name AS student_last_name
FROM Students s
LEFT JOIN Enrollments e ON s.student_id = e.student_id
WHERE e.student_id IS NULL;
```

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

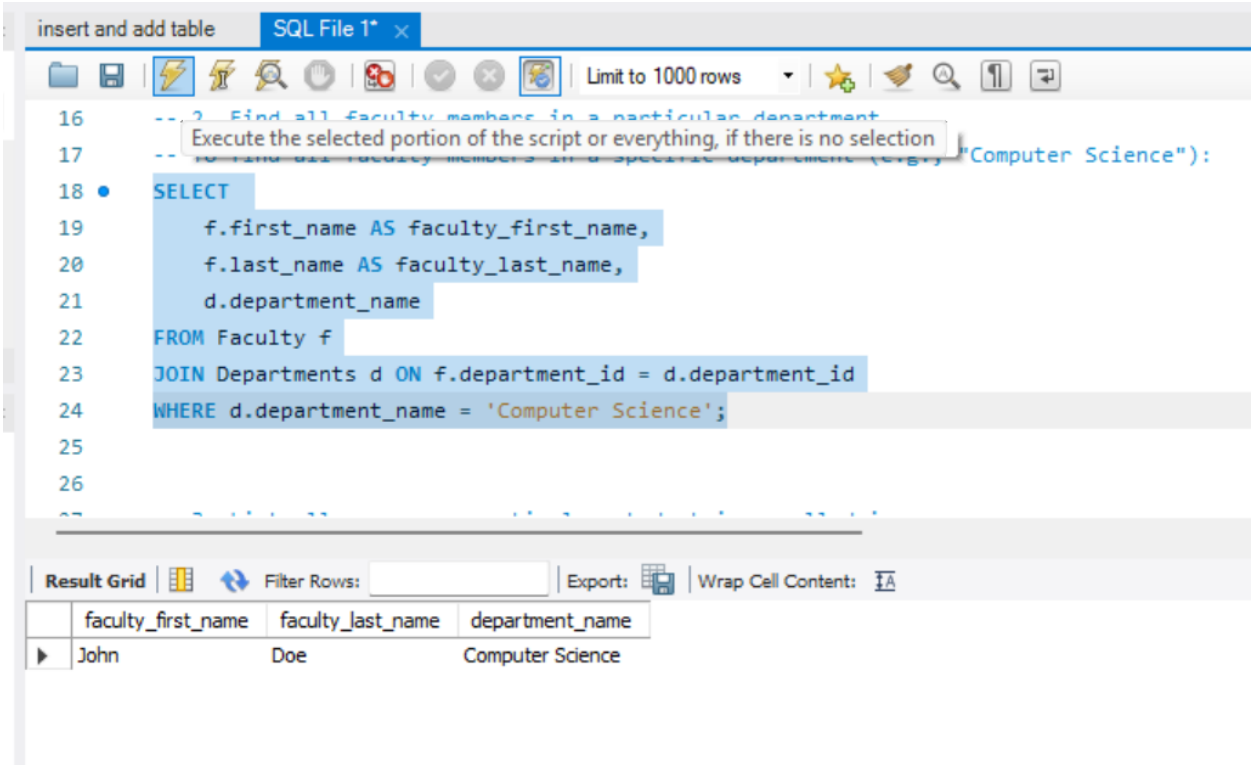
```sql
-- 5. Find the average grade of students in a specific course.
-- To find the average grade of students in a specific course (e.g., course with course_code 'CS101'):
SELECT
    c.course_code,
    c.course_name,
    AVG(CASE
        WHEN e.grade = 'A' THEN 4.0
        WHEN e.grade = 'B' THEN 3.0
        WHEN e.grade = 'C' THEN 2.0
        WHEN e.grade = 'D' THEN 1.0
```

- screenshots of query results

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



2. Find all faculty members in a particular department.



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

```
-- 3. List all courses a particular student is enrolled in.
-- To list all courses a particular student is enrolled in (e.g., student with student_id 1):

SELECT
    c.course_code,
    c.course_name,
    e.enrollment_date,
    e.grade
FROM Enrollments e
JOIN Courses c ON e.course_id = c.course_id
WHERE e.student_id = 1;
```

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

course_code	course_name	enrollment_date	grade
CS101	Introduction to Programming	2024-03-01	A

4. Retrieve students who have not enrolled in any course.

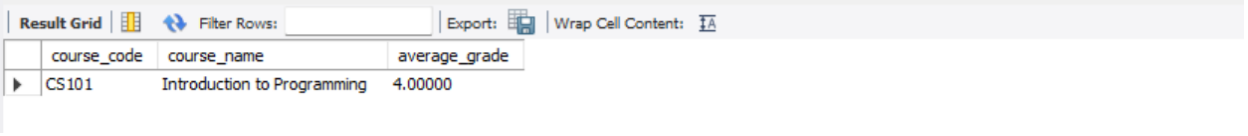
```
-- 4. Retrieve students who have not enrolled in any course.
-- To retrieve all students who have not enrolled in any course:

SELECT
    s.first_name AS student_first_name,
    s.last_name AS student_last_name
FROM Students s
LEFT JOIN Enrollments e ON s.student_id = e.student_id
WHERE e.student_id IS NULL;
```

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

student_first_name	student_last_name

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

```
50
51      -- 5. Find the average grade of students in a specific course.
52      -- To find the average grade of students in a specific course (e.g., course with course_code 'CS101'):
53      SELECT
54          c.course_code,
55          c.course_name,
56          AVG(CASE
57              WHEN e.grade = 'A' THEN 4.0
58              WHEN e.grade = 'B' THEN 3.0
```



course_code	course_name	average_grade
CS101	Introduction to Programming	4.00000