Noura ALmaskari

University Database – DQL & DML Tasks

إضافة الاعمدة الـناقصة في جدول الـطلاب--

```
ALTER TABLE student ADD EnrollmentDate DATE, Status VARCHAR(20), GPA
              DECIMAL(3,2), Advisor VARCHAR(100);

UPDATE student SET EnrollmentDate = '2021-09-01', Status = 'Active',
        GPA = 3.4, Advisor = 'Dr. Ali' WHERE StuID = 1000;

UPDATE student SET EnrollmentDate = '2022-09-01', Status = 'Active',
        GPA = 3.8, Advisor = 'Dr. Sara' WHERE StuID = 1001;

UPDATE student SET EnrollmentDate = '2020-09-01', Status = 'Active',
          GPA = 2.9, Advisor = NULL WHERE StuID = 1002;

   UPDATE student SET EnrollmentDate = '2021-02-01', Status =
  'Inactive', GPA = 3.1, Advisor = 'Dr. Mona' WHERE StuID = 1003;

UPDATE student SET EnrollmentDate = '2019-09-01', Status = 'Active',
          GPA = 3.6, Advisor = NULL WHERE StuID = 1004;
```

DQL

1. Display all student records.

2. Display each student's full name, enrollment date, and current status.

3. Display each course title and credits.

4. Display each student's full name and GPA as GPA Score.

5. List student IDs and names of students with GPA greater than 3.5.
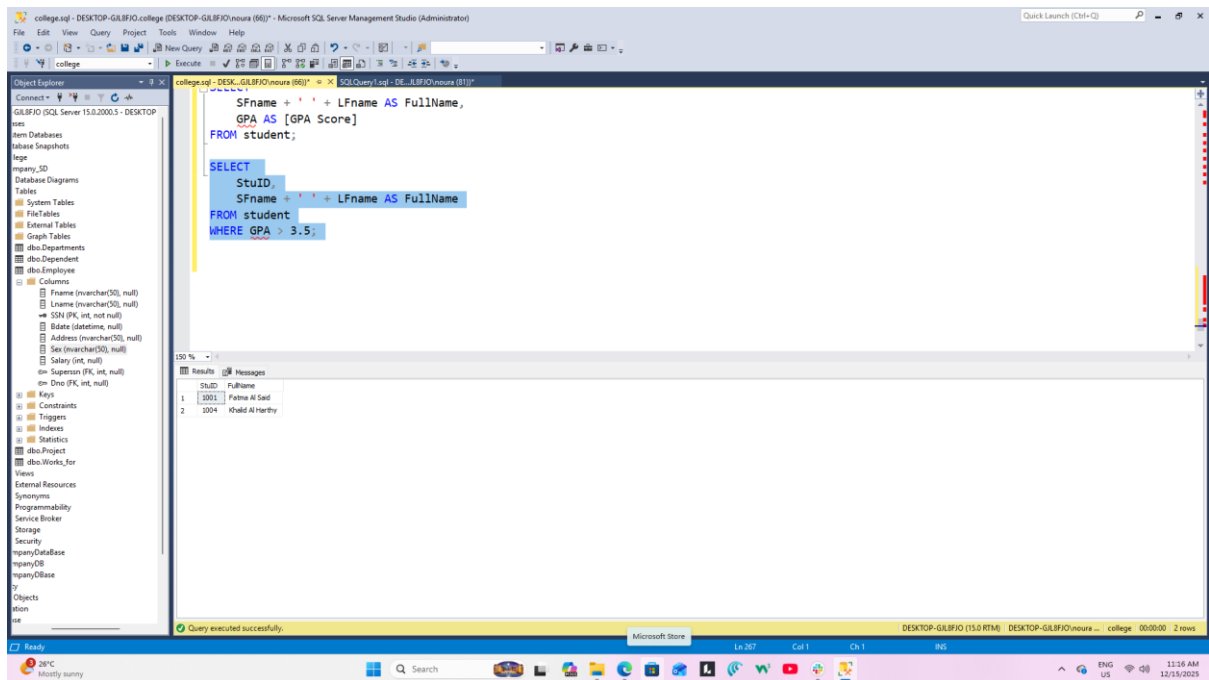
6. List students who enrolled before 2022.
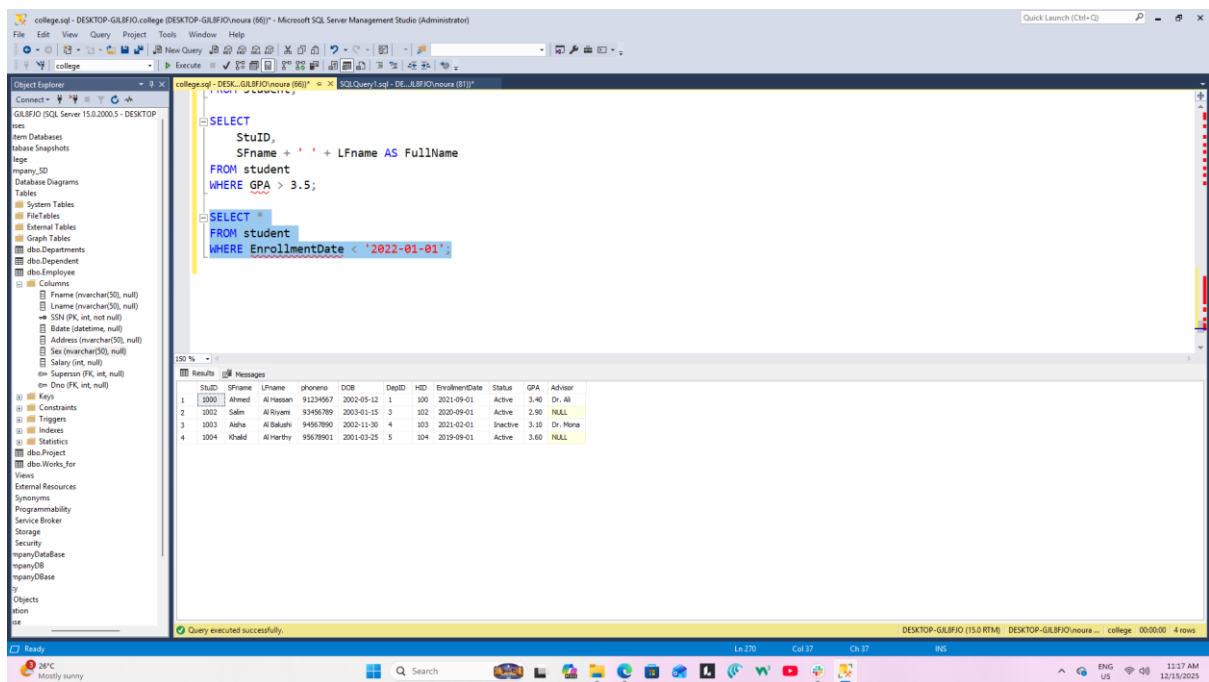
7. Display students with GPA between 3.0 and 3.5.

8. Display students ordered by GPA descending.

9. Display the maximum, minimum, and average GPA.

10. Display total number of students.

11. Display students whose names end with 'a'.

12. Display students with NULL advisor.

13. Display students enrolled in 2021.
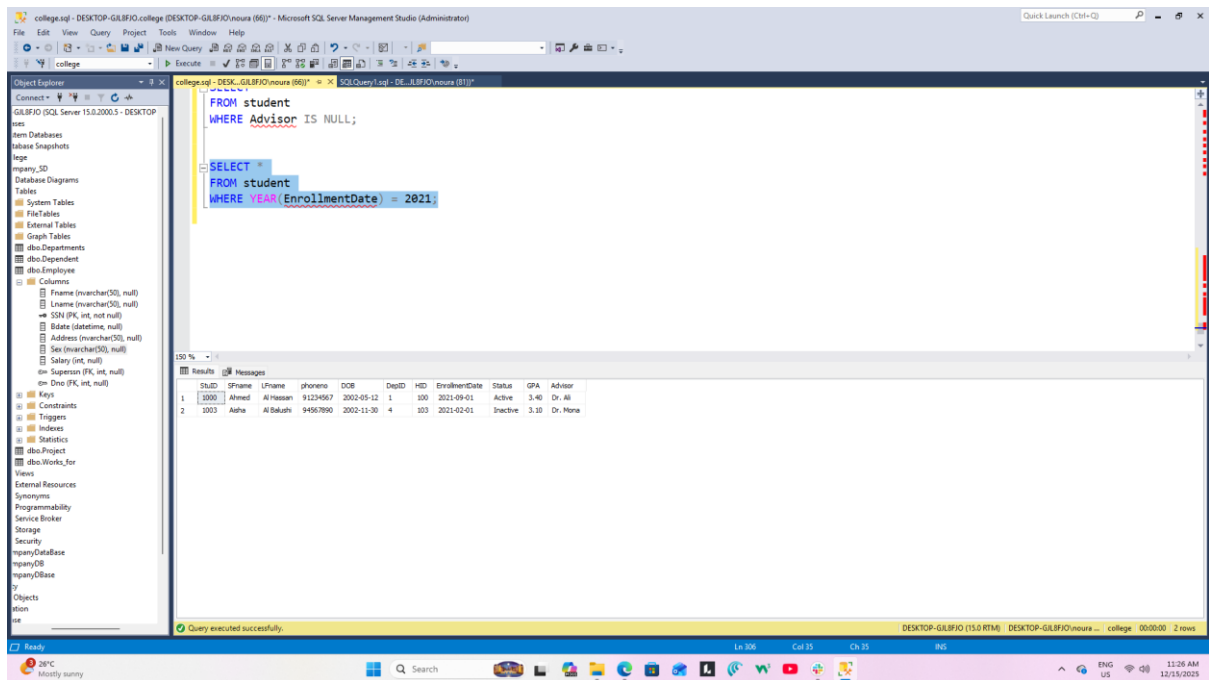
DML

14. Insert your data as a new student (Student ID = 300045, Program ID = 2, GPA = 3.6).
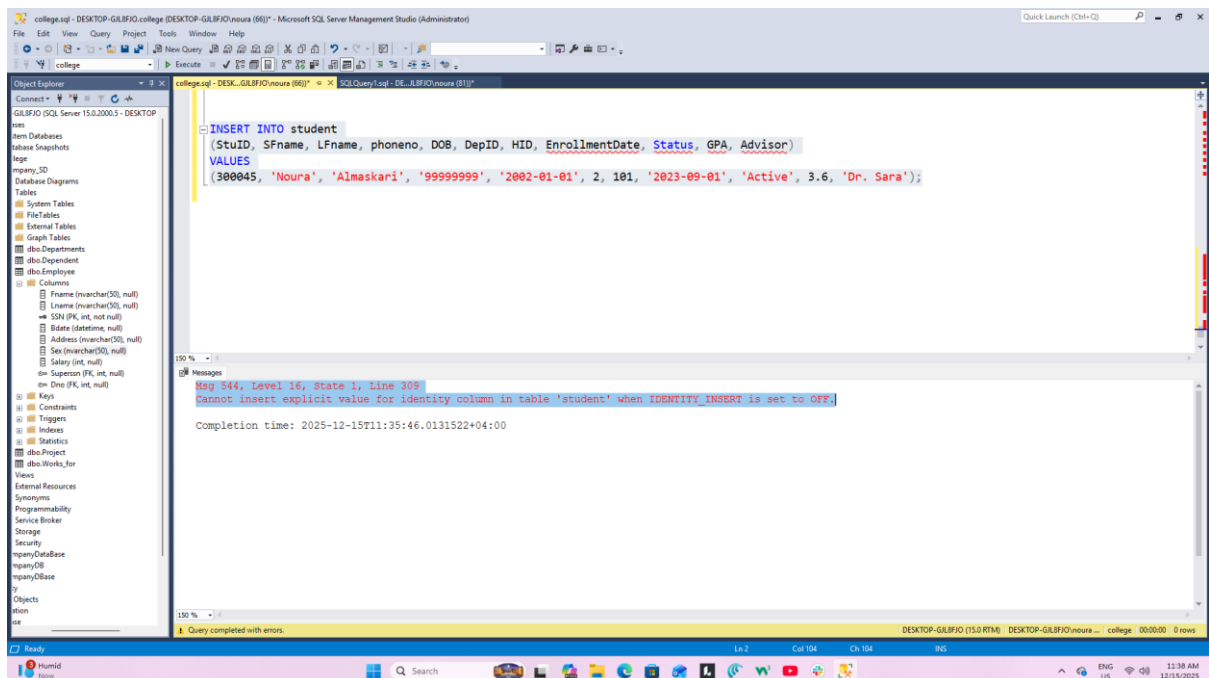
StuID INT PRIMARY KEY IDENTITY(1000,1)

يعني:

- SQL Server هو الذي يولّد الرقم تلقائيًا
- **لا يسمح** بإدخال قيمة يدويًا
- لذلك عند كتابة:

StuID = 300045

يظهر خطأ:

Cannot insert explicit value for identity column

ساترك StuID لـ IDENTITY

ولن اكتب StuID في INSERT
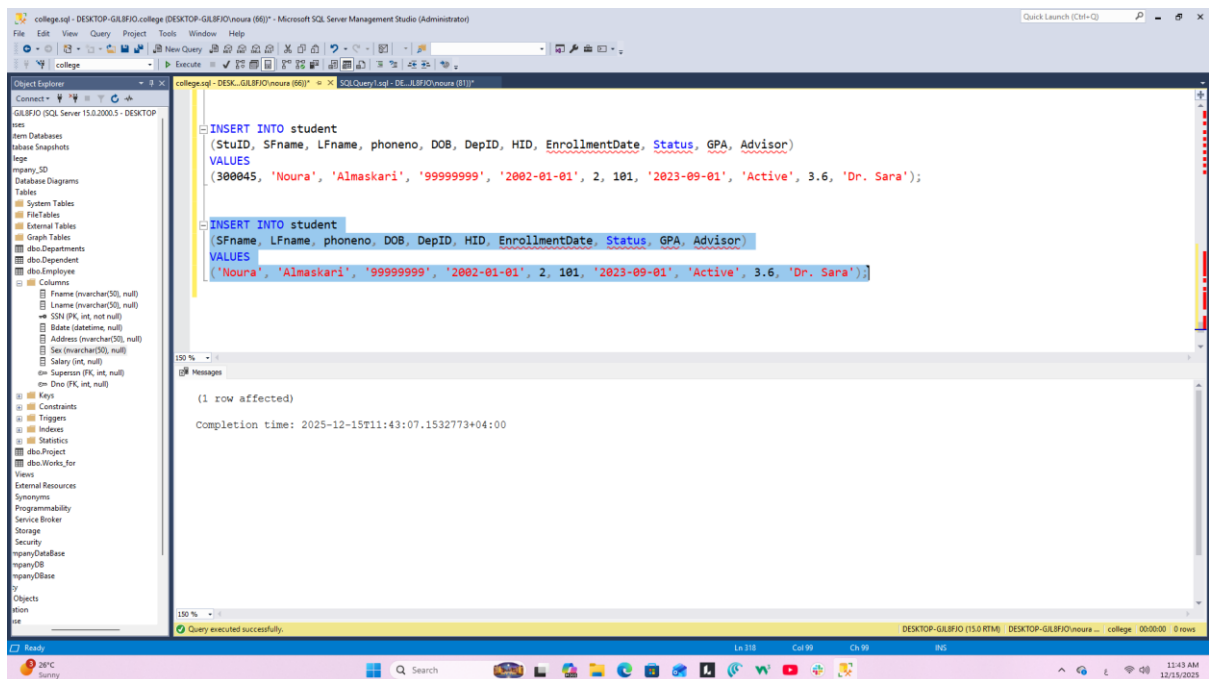
15. Insert another student (your friend) with GPA and advisor set to NULL.
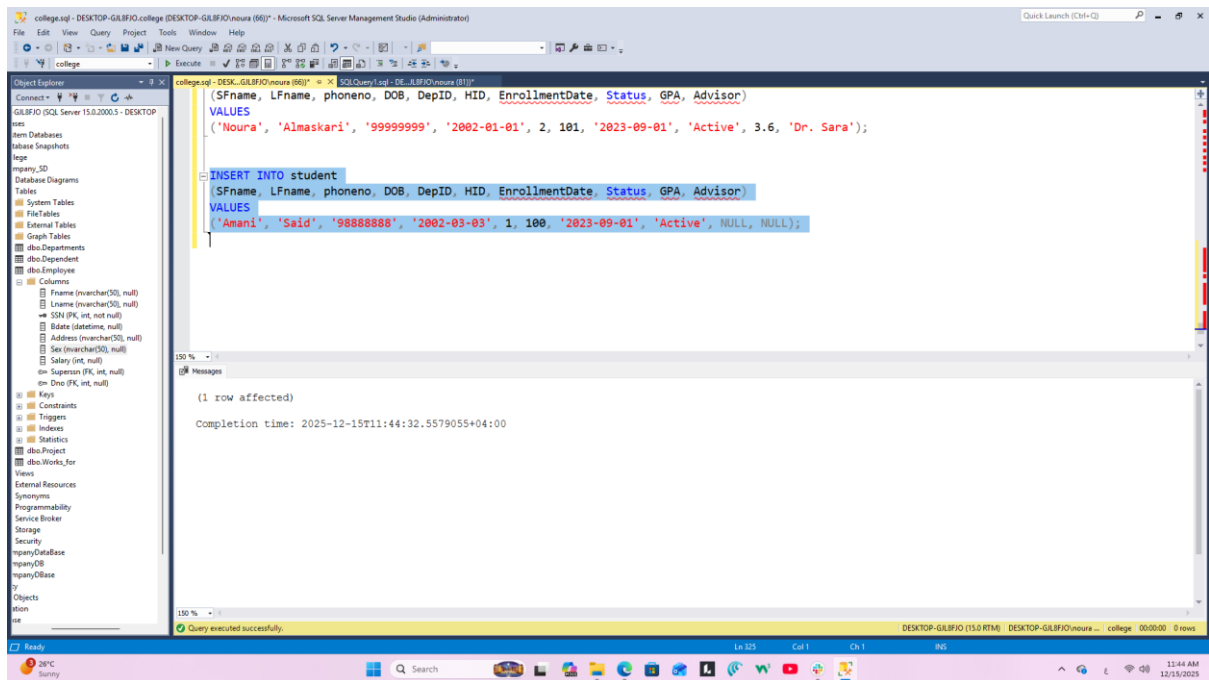
16. Increase your GPA by 0.2.
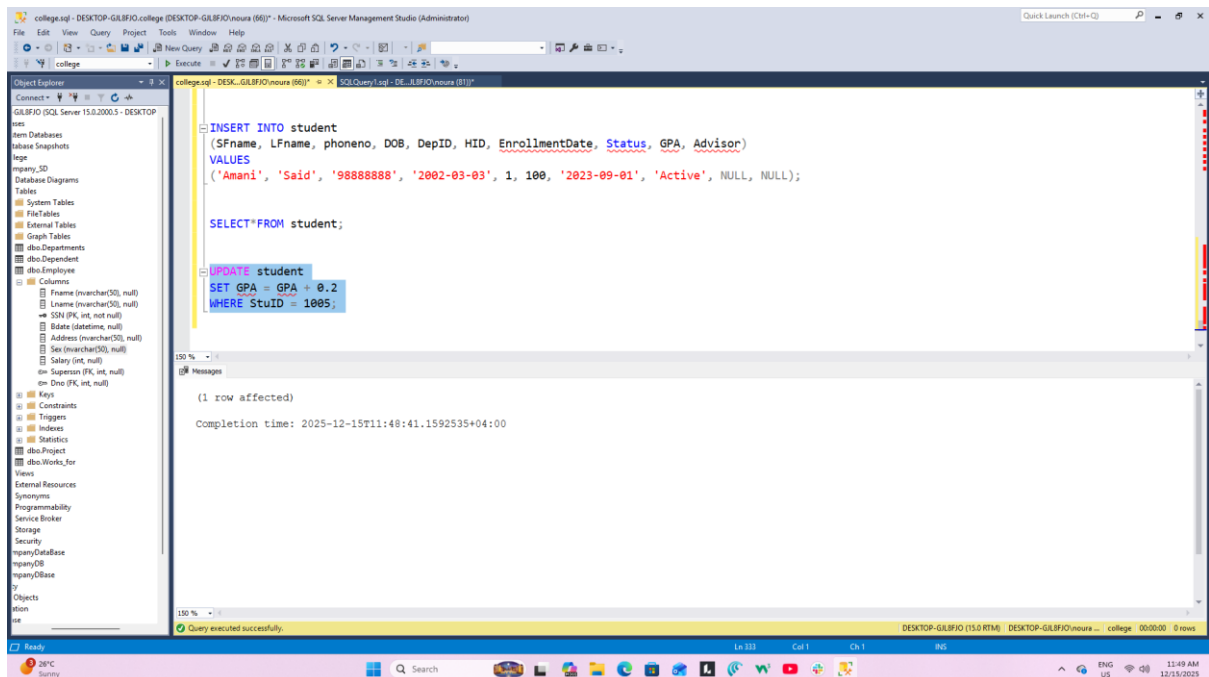
17. Set GPA to 2.0 for students with GPA below 2.0.

```sql
SELECT*FROM student;


UPDATE student
SET GPA = GPA + 0.2
WHERE StuID = 1005;


UPDATE student
SET GPA = 2.0
WHERE GPA < 2.0;
```

(0 rows affected)

Completion time: 2025-12-15T11:50:33.6867823+04:00
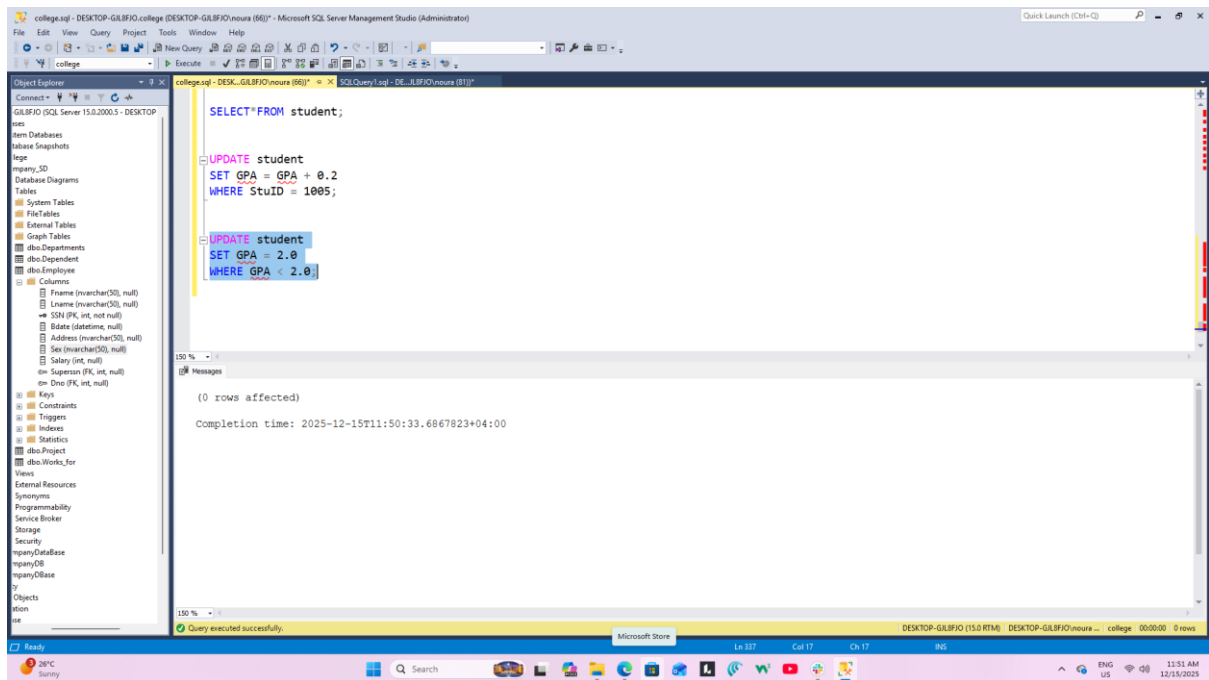
18. Increase GPA by 0.1 for students enrolled before 2020.


```sql
UPDATE student
SET GPA = GPA + 0.2
WHERE StuID = 1005;


UPDATE student
SET GPA = 2.0
WHERE GPA < 2.0;


UPDATE student
SET GPA = GPA + 0.1
WHERE EnrollmentDate < '2020-01-01';
```

(1 row affected)

Completion time: 2025-12-15T12:10:14.3478751+04:00
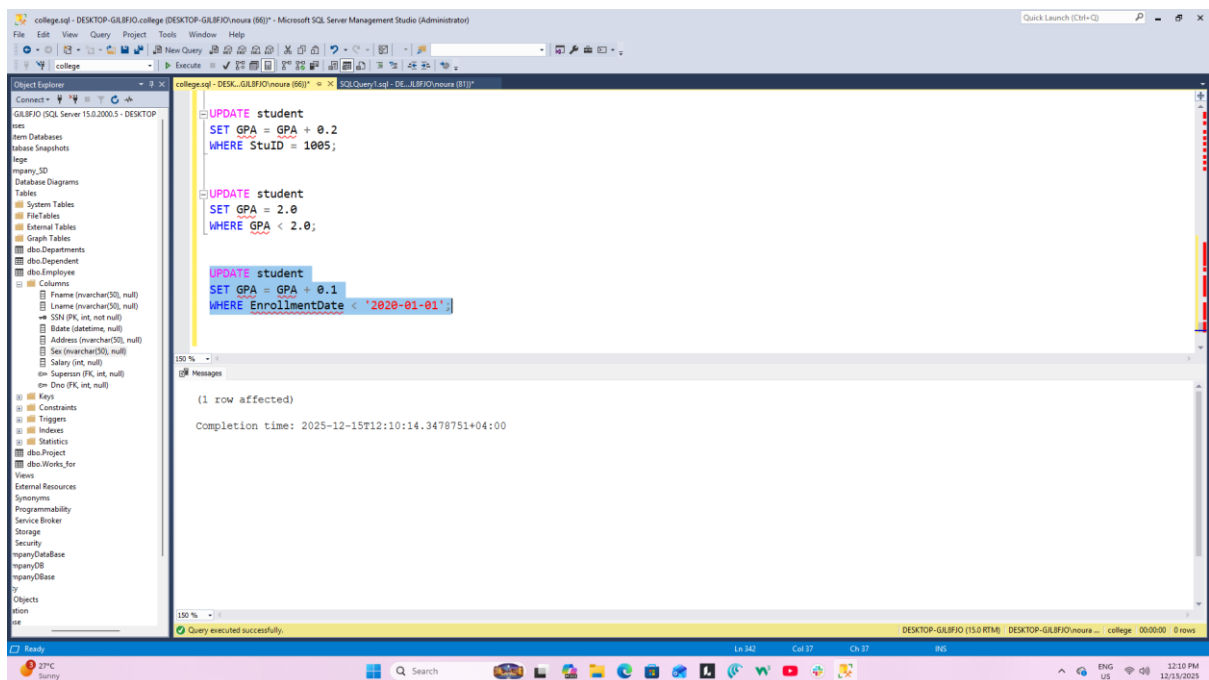
19. Delete students with status 'Inactive'.
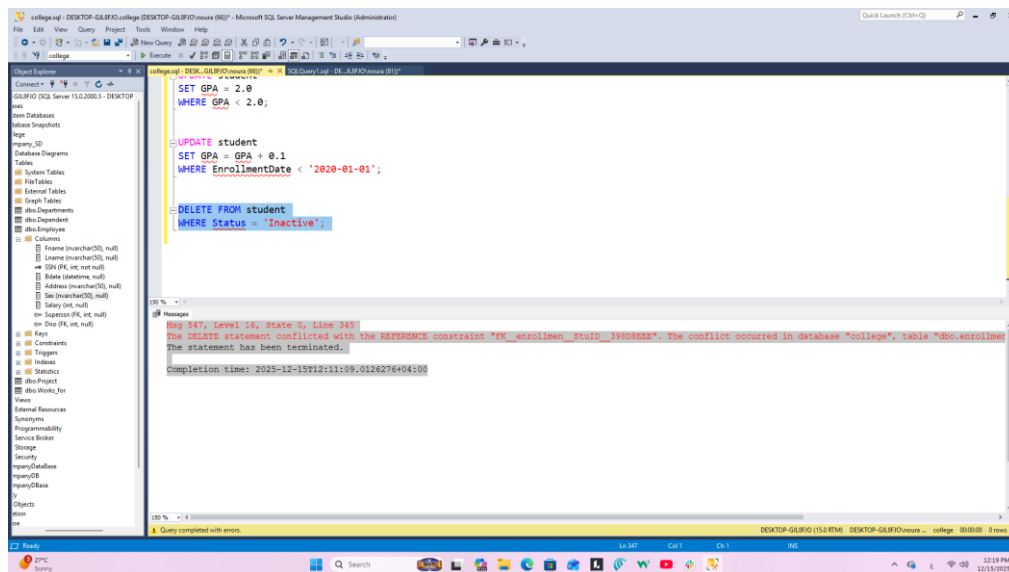
enrollment: الطالب مربوط بسجلات في جدول

student (StuID) ⟵— FK — enrollment (StuID)

SQL Server يمنع الحذف لأن:

لا يمكن حذف سجل أب (Parent) له سجلات أبناء ((Child

اقدر اعمل Soft Delete

UPDATE student

SET Status = 'Deleted'

WHERE Status = 'Inactive';

او احذف السجلات التابعة أولًا ثم الطالب

-- 1. حذف من الجداول التابعة

DELETE FROM enrollment WHERE StuID IN (SELECT StuID FROM student
WHERE Status = 'Inactive');

DELETE FROM studentsubject WHERE StuID IN (SELECT StuID FROM student
WHERE Status = 'Inactive');

DELETE FROM studentexam WHERE StuID IN (SELECT StuID FROM student
WHERE Status = 'Inactive');

-- 2. حذف الطالب

DELETE FROM student WHERE Status = 'Inactive';