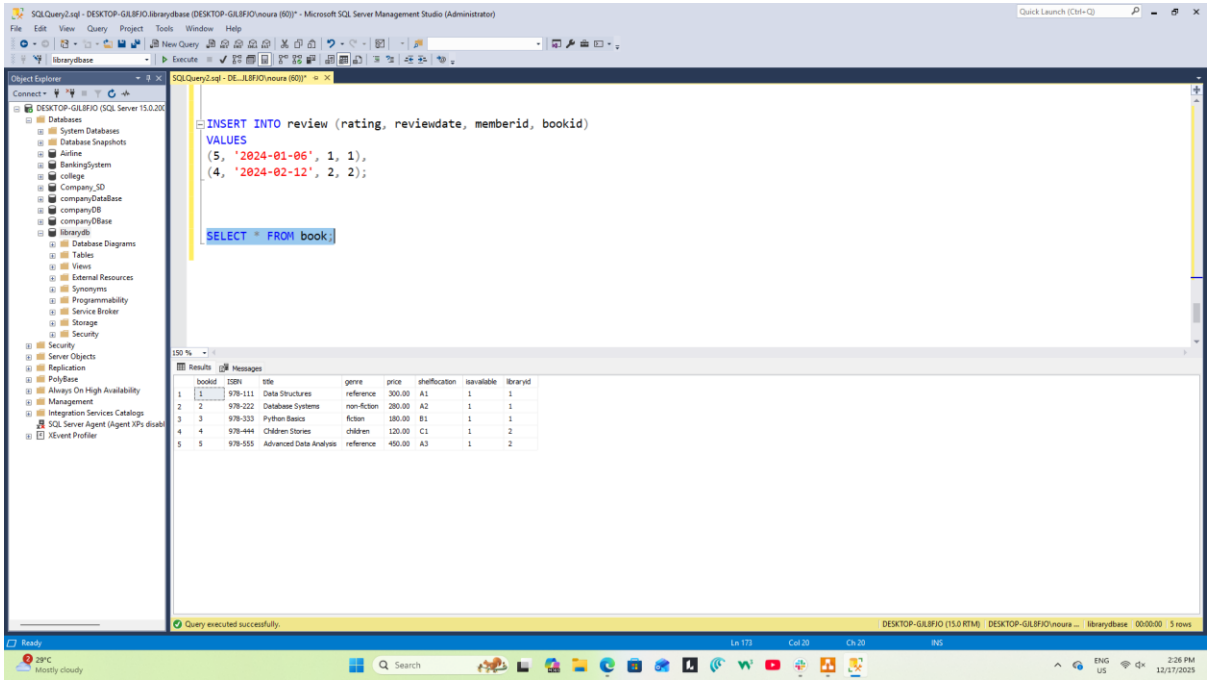
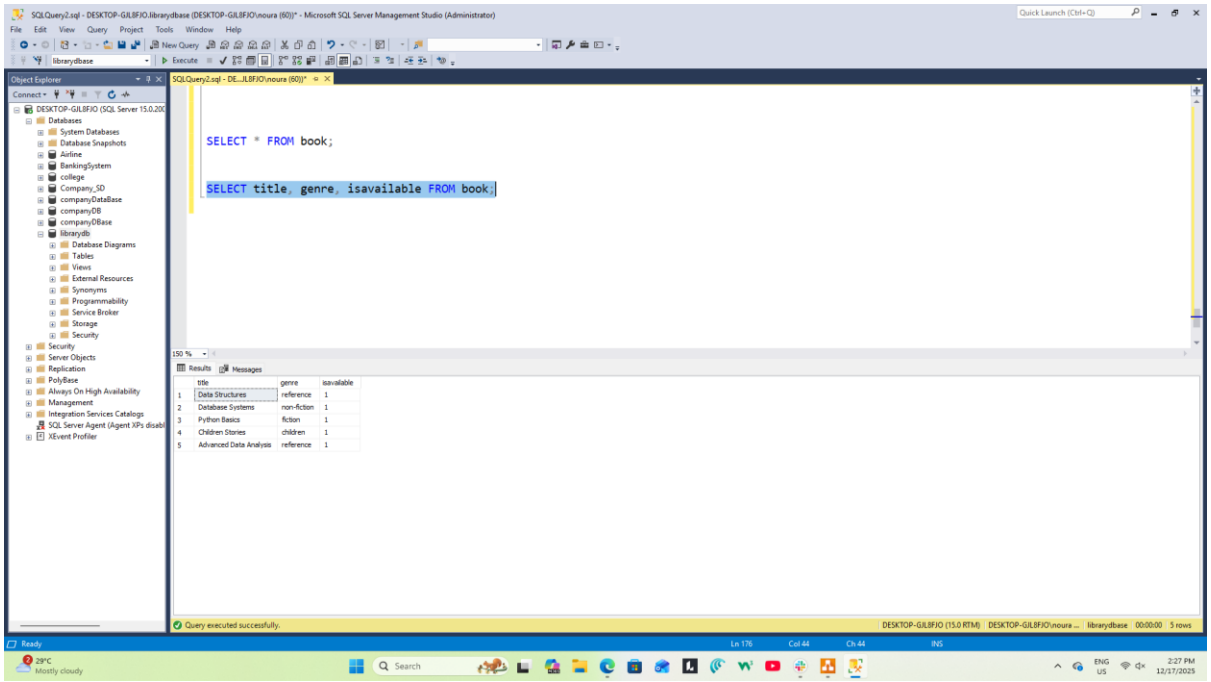
Library Database – DQL & DML Tasks
DQL

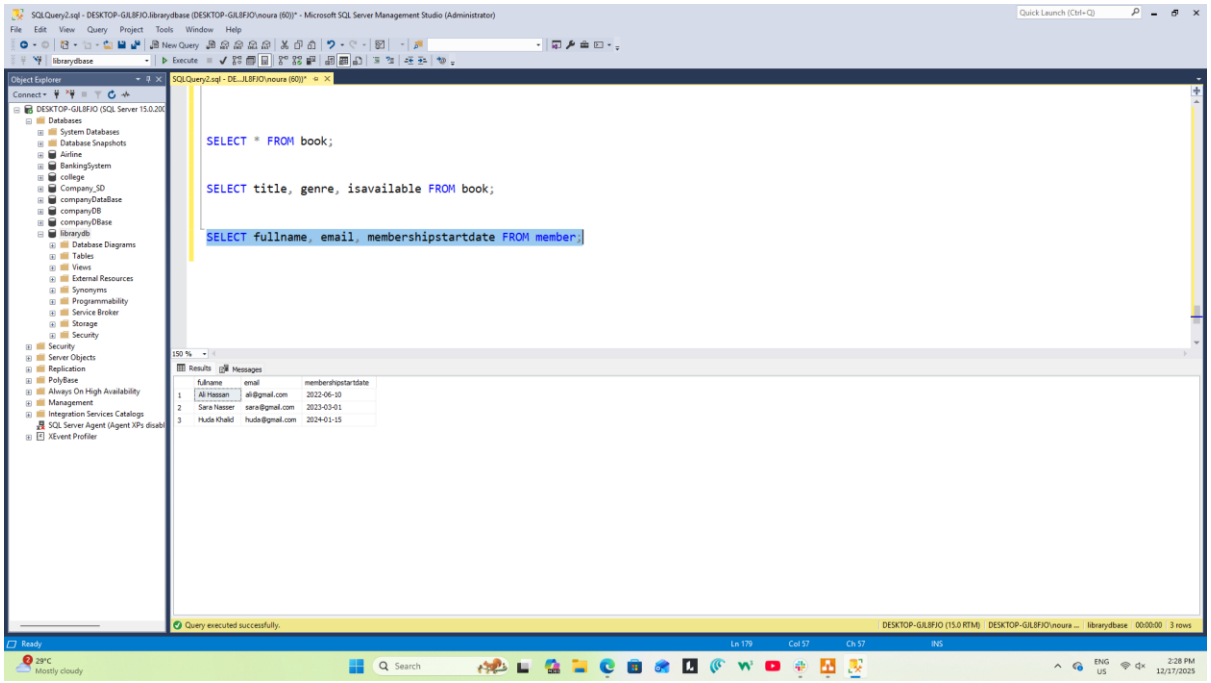
1. Display all book records.



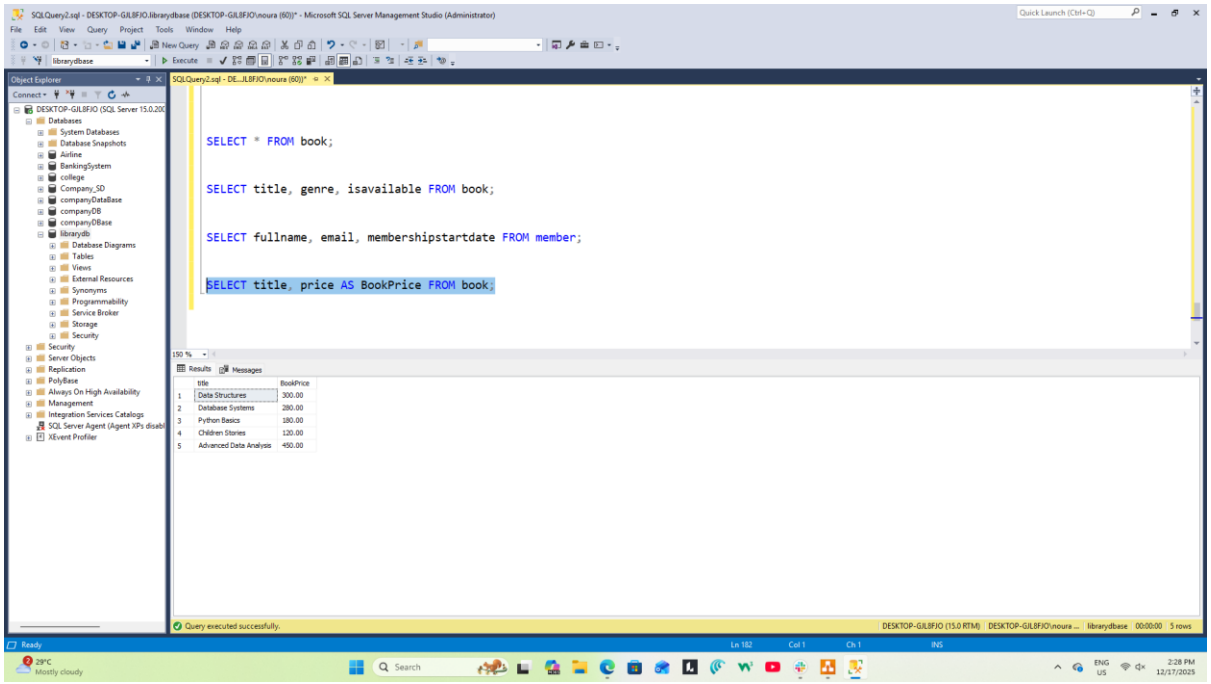
2. Display each book's title, genre, and availability.



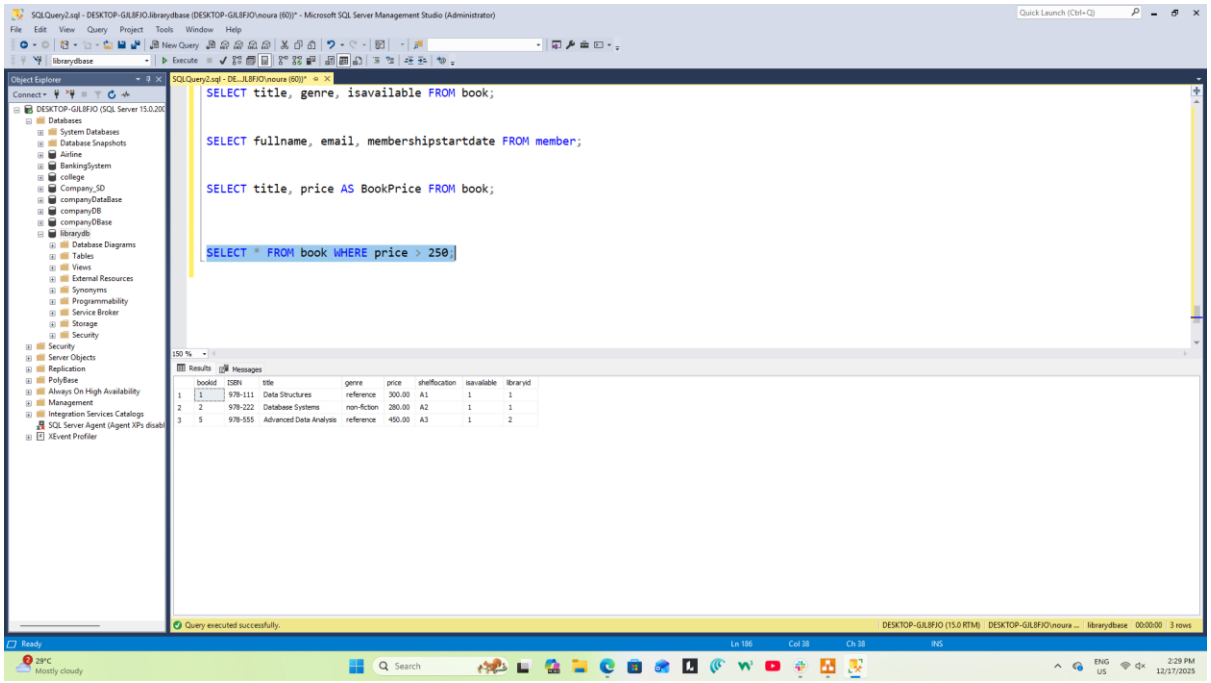
3. Display all member names, email, and membership start date.



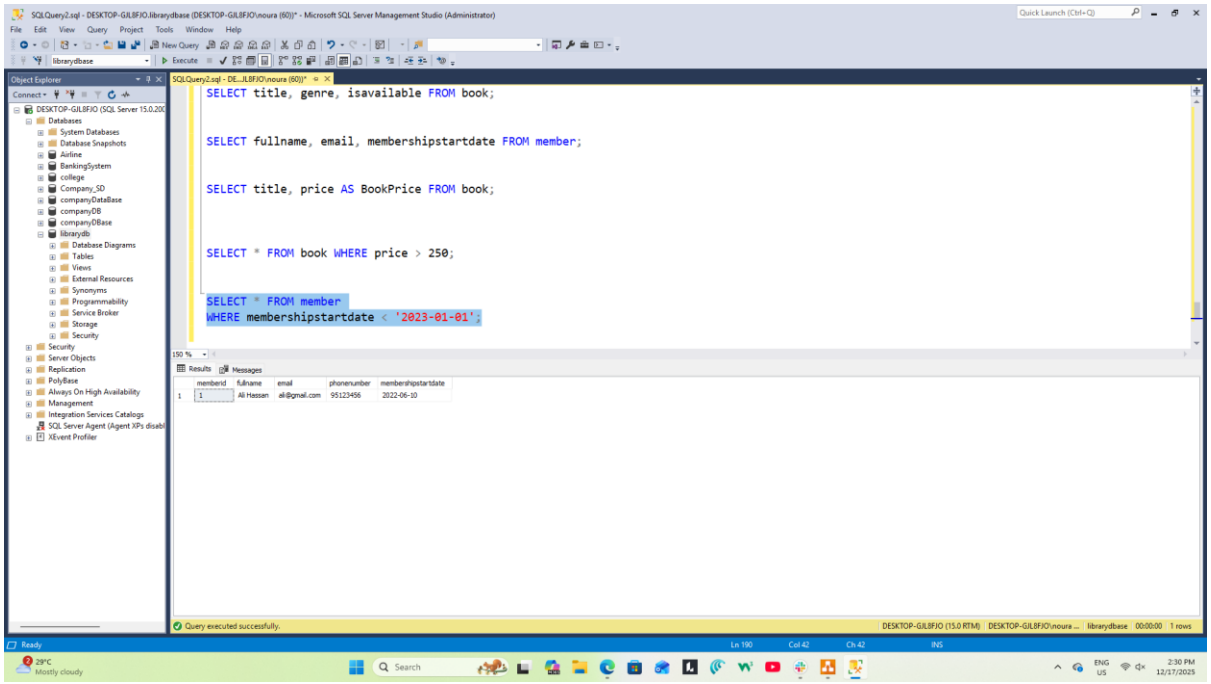
4. Display each book’s title and price as BookPrice.



5. List books priced above 250 LE.



6. List members who joined before 2023.



7. Display books published after 2018.

SELECT *FROM book WHERE publishedyear > 2018;

The Book table does not contain an attribute that represents the publication year of a book. Therefore, the required query cannot be performed.

Modify the table structure
Add a new column to store the publication year:

```
ALTER TABLE book
ADD publishedyear INT;
```

Insert or update publication year values
Assign publication years to existing records:

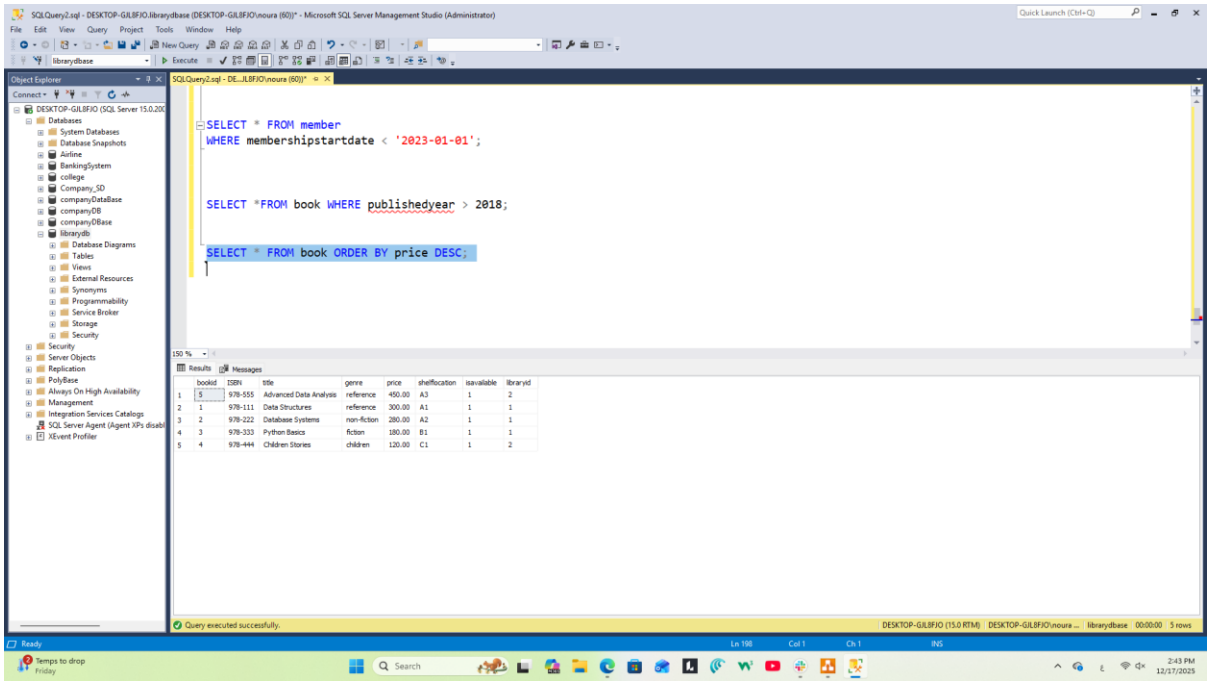
```
UPDATE book
SET publishedyear = 2020
WHERE bookid = 1;

UPDATE book
SET publishedyear = 2017
WHERE bookid = 2;
```

(Repeat as needed for other books.)
Execute the required query
Now the query can be executed correctly:

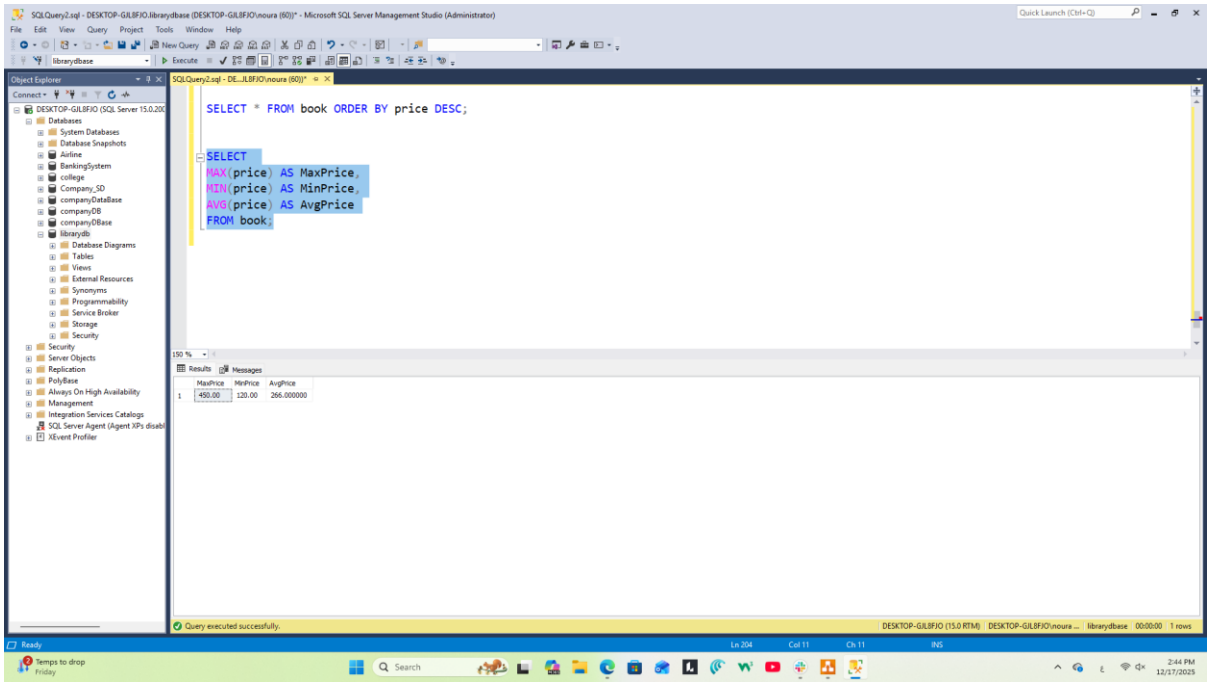
```
SELECT *
FROM book
WHERE publishedyear > 2018;
```

Conclusion
By adding the PublishedYear attribute to the Book table and populating it with valid data, the database can support queries that retrieve books published after a specific year.

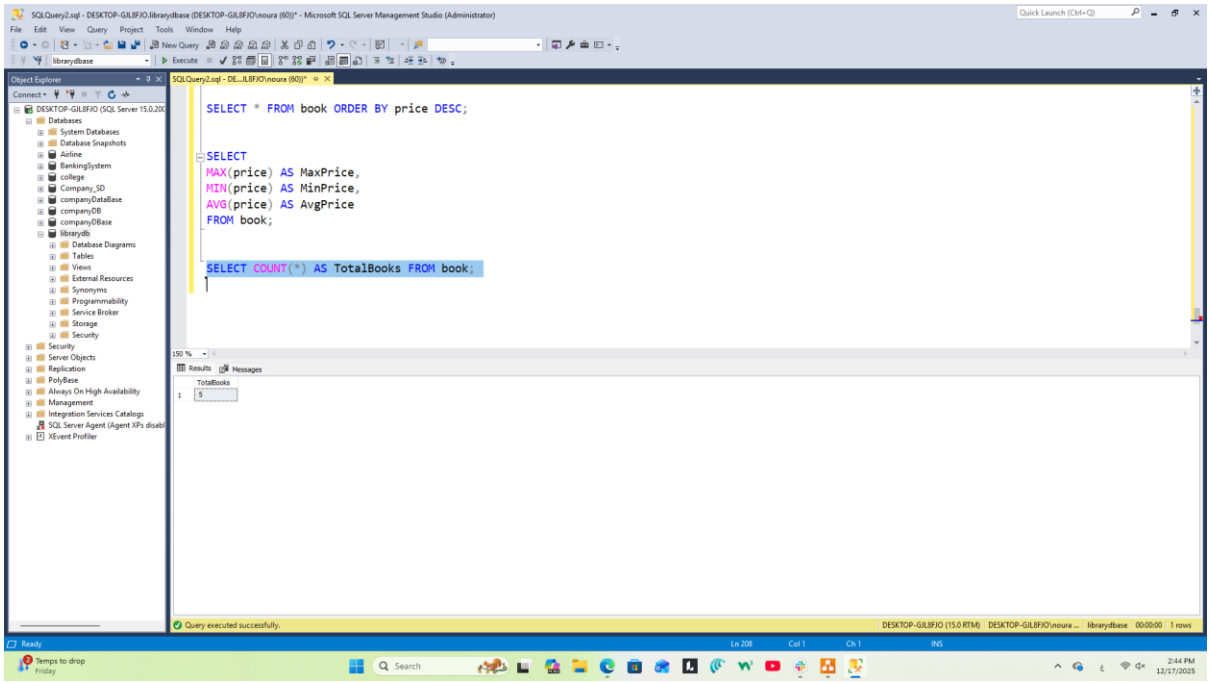
8. Display books ordered by price descending.



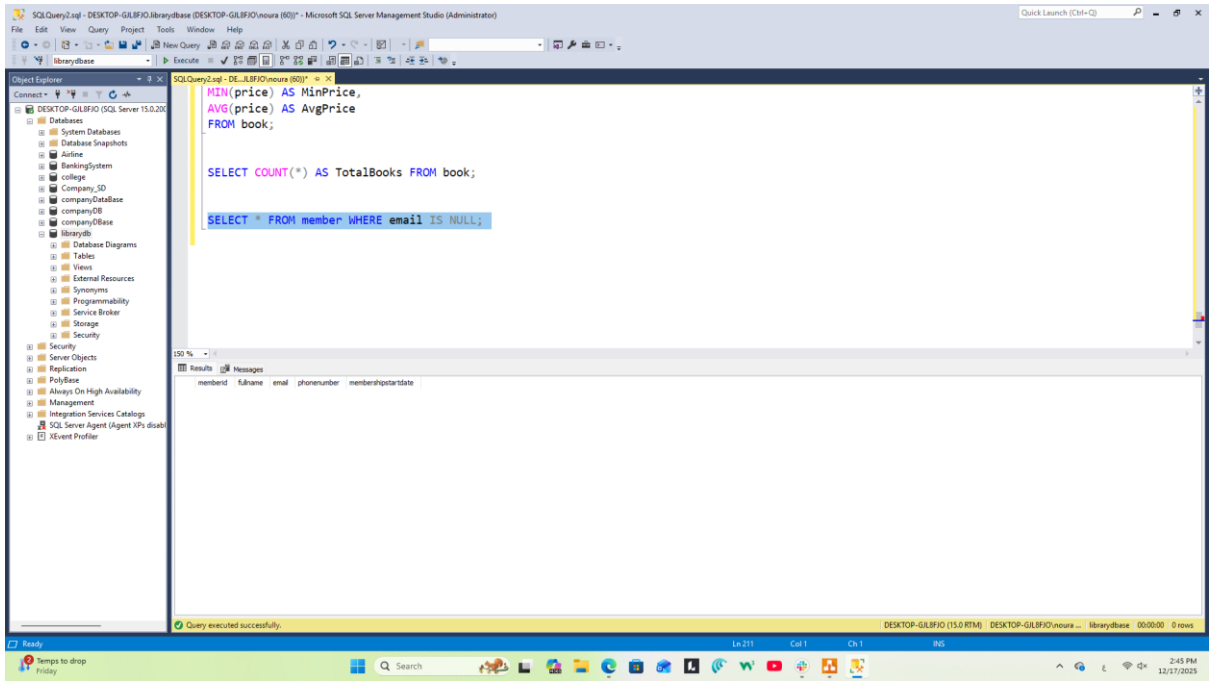
9. Display the maximum, minimum, and average book price.



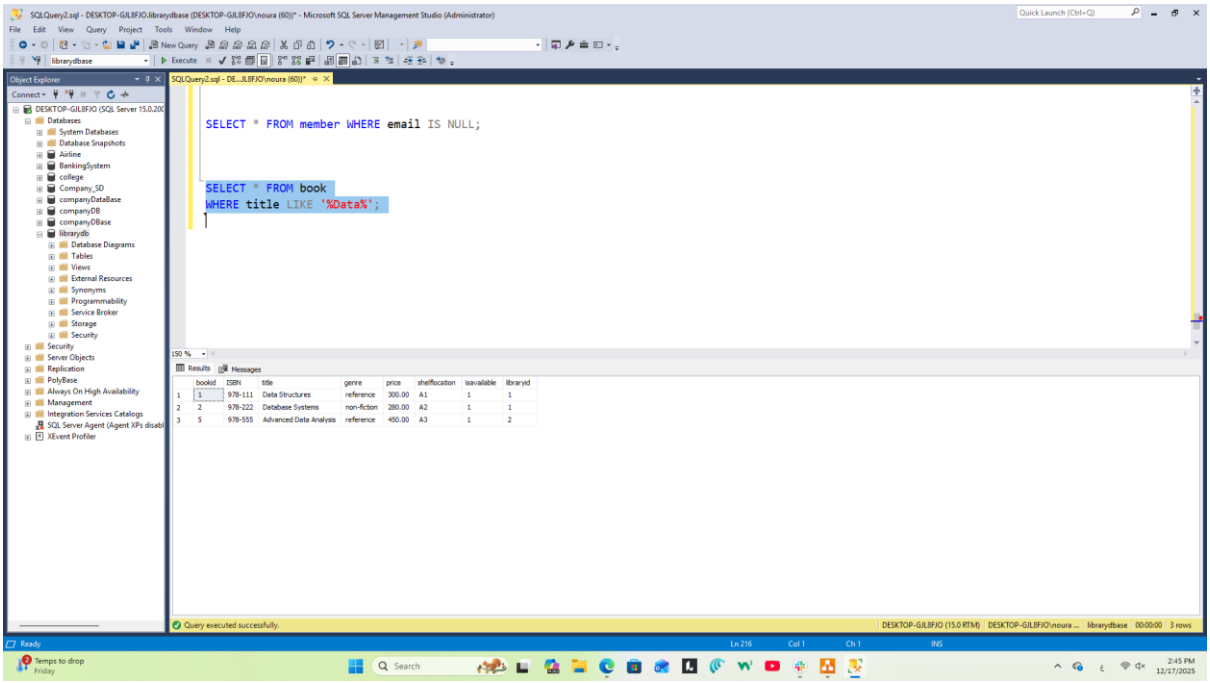
10. Display total number of books



11. Display members with NULL email.

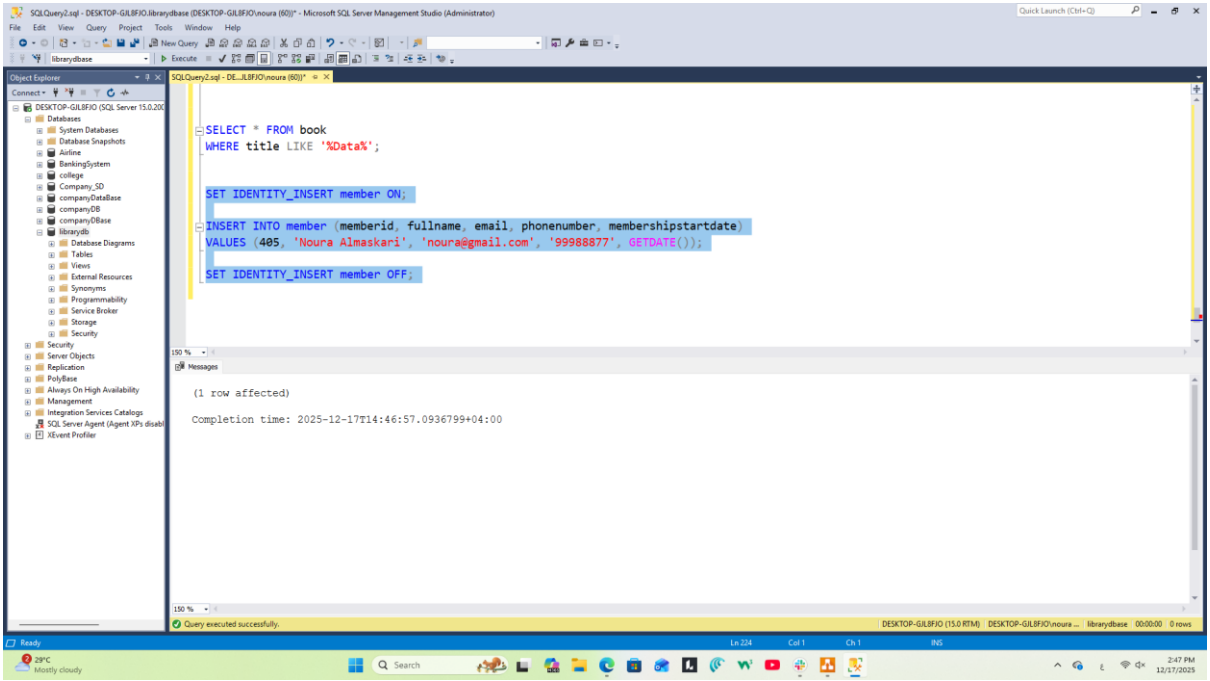


12. Display books whose title contains 'Data'.

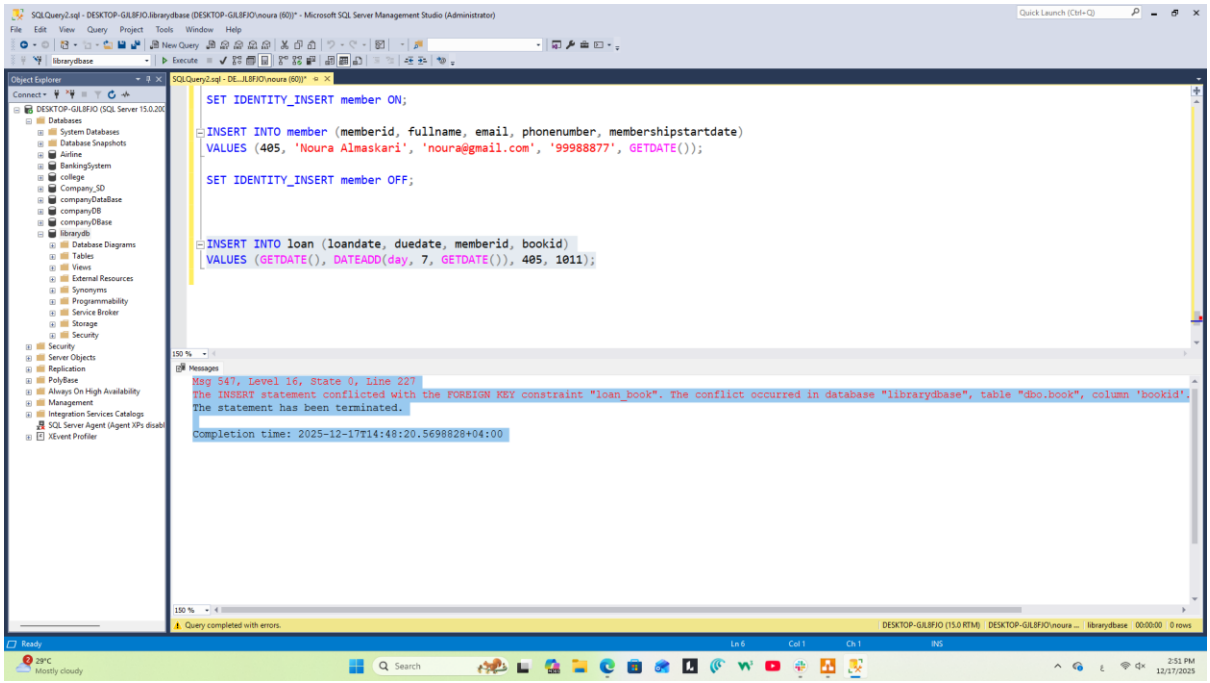


DML

13. Insert yourself as a member (Member ID = 405).

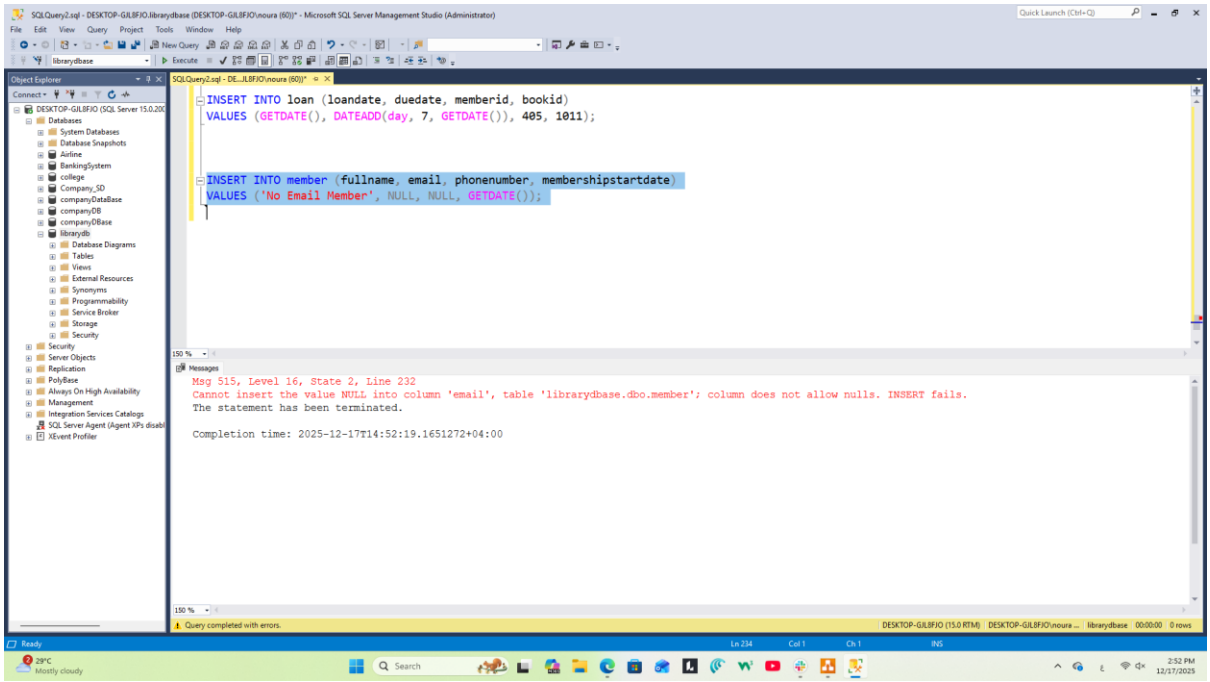


14. Register yourself to borrow book ID 1011.



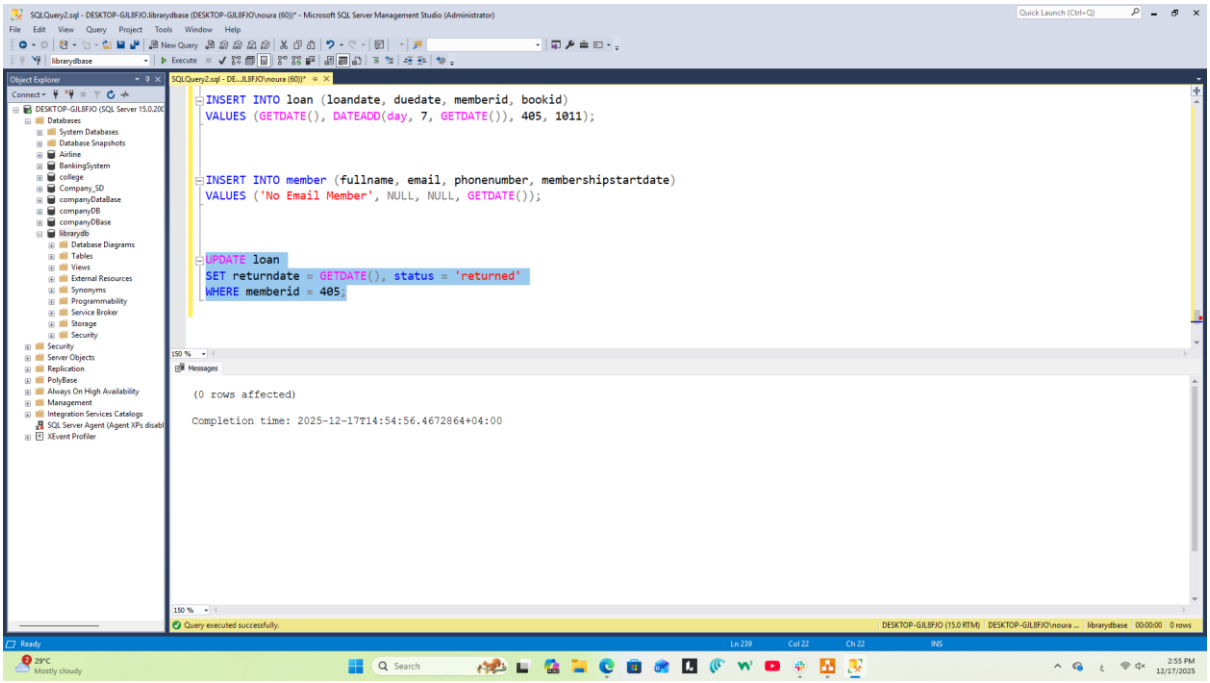
The INSERT statement failed because the referenced BookID does not exist in the Book table.

15. Insert another member with NULL email and phone.

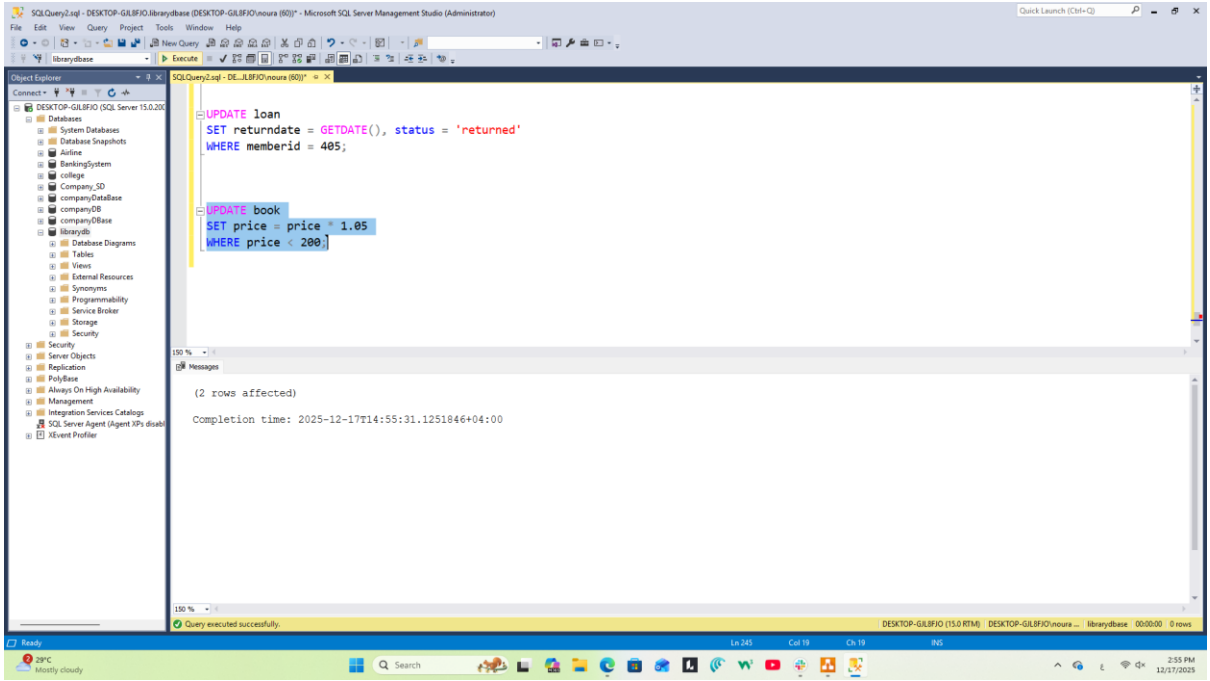


This operation is not possible because the Email attribute in the Member table does not allow NULL values according to the table constraints.

16. Update the return date of your loan to today.

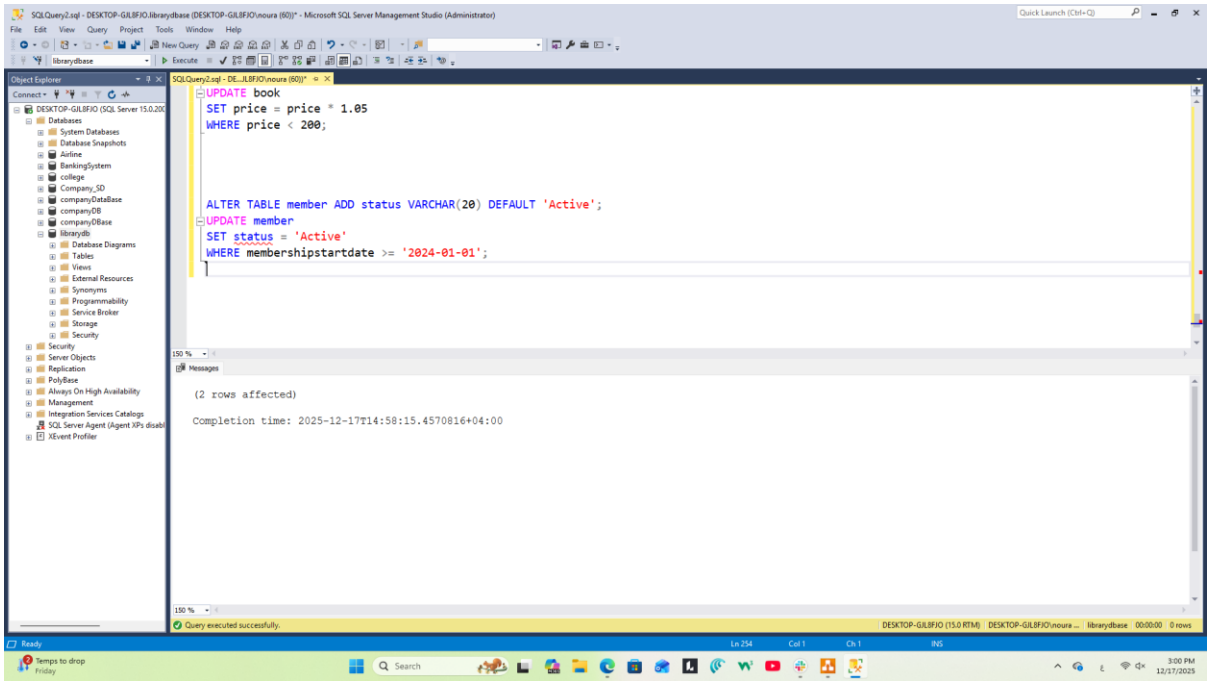


17. Increase book prices by 5% for books priced under 200.

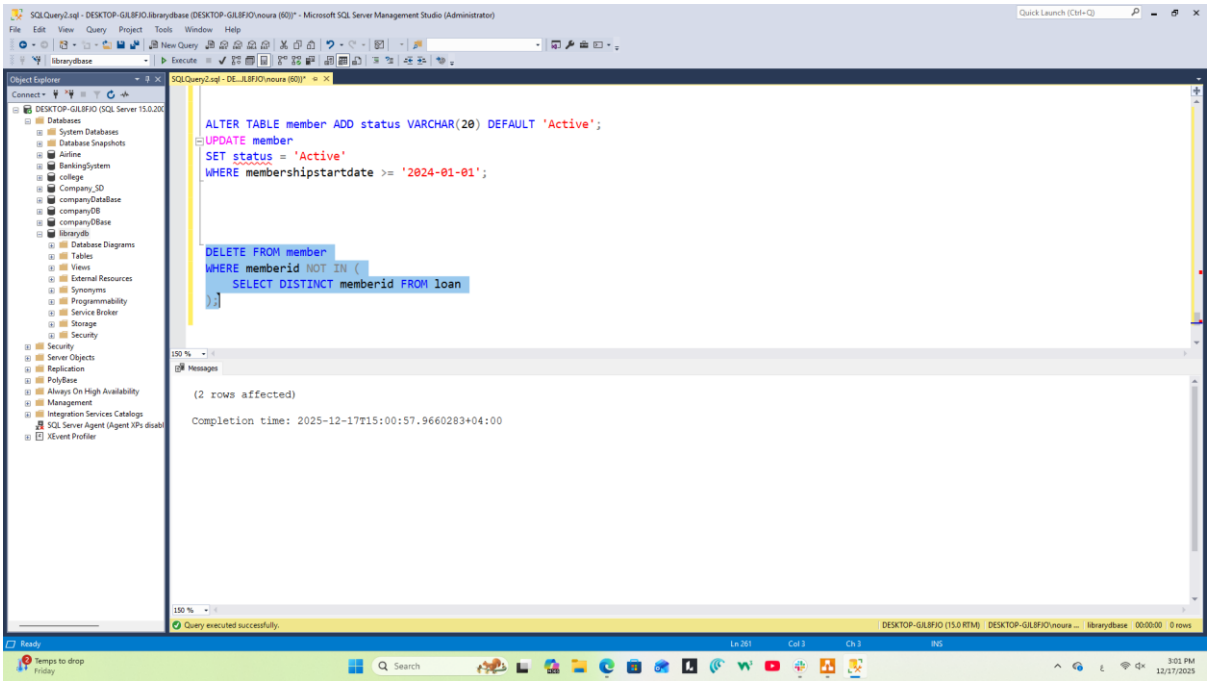


18. Update member status to 'Active' for recently joined members.

The original table design does not include a status column in the Member table. Therefore, it is not possible to directly update a member's status unless the column is added first.



19. Delete members who never borrowed a book.


SQLQuery2.sql - DESKTOP-GJL8FJO.librarydbase (DESKTOP-GJL8FJO\noura (60))* - Microsoft SQL Server Management Studio (Administrator)
ALTER TABLE member ADD status VARCHAR(20) DEFAULT 'Active';
UPDATE member
SET status = 'Active'
WHERE membershipstartdate >= '2024-01-01';
DELETE FROM member
WHERE memberid NOT IN (
SELECT DISTINCT memberid FROM loan
);
(2 rows affected)
Completion time: 2025-12-17T15:00:57.9660283+04:00
Query executed successfully.