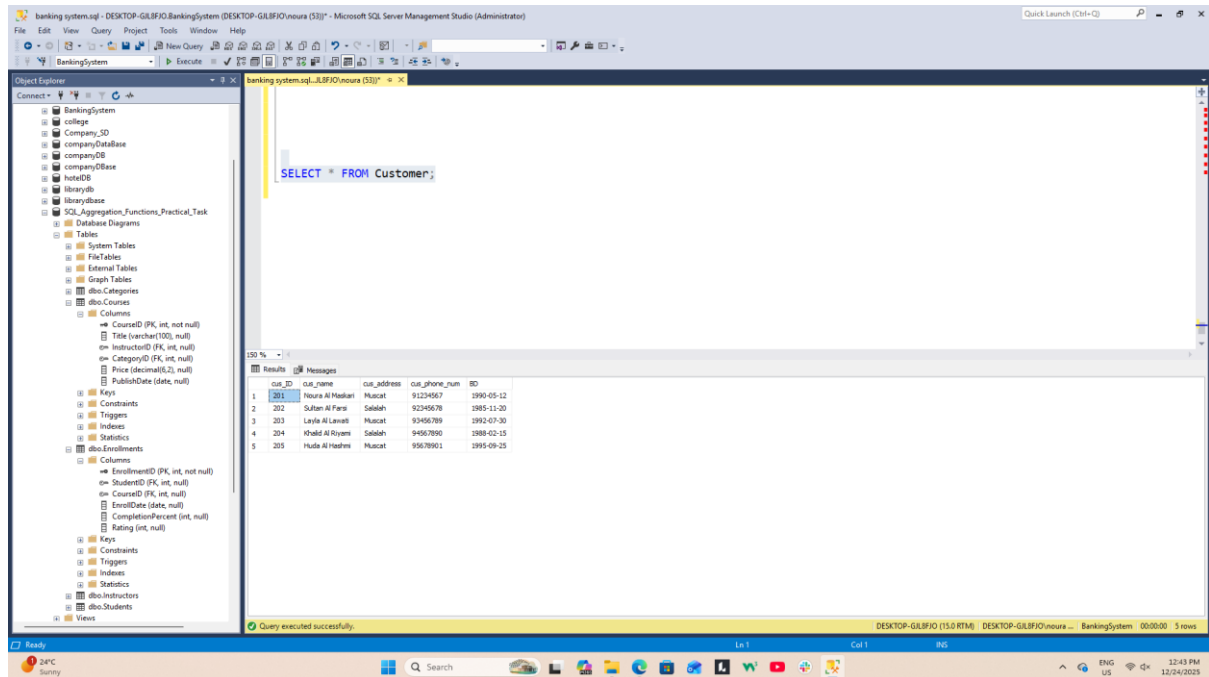


Bank Database – DQL & DML Tasks

DQL

1. Display all customer records.



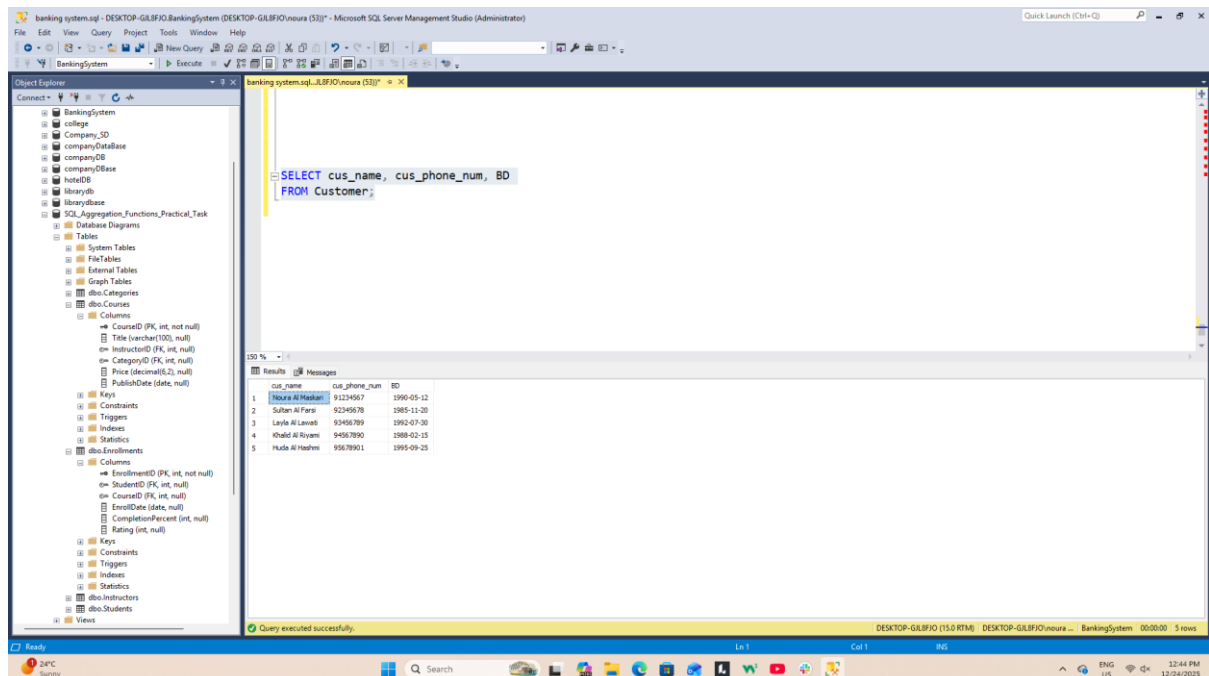
The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The Object Explorer on the left displays the database structure, including tables, views, and functions. The central query window shows the following SQL query:

```
SELECT * FROM Customer;
```

The Results pane displays the output of the query, showing 5 rows of customer data:

cus_id	cus_name	cus_address	cus_phone_num	BD
201	Noura Al Maslan	Muscat	91234567	1990-05-12
202	Sultan Al Farsi	Sabab	92345678	1985-11-20
203	Layla Al Lami	Muscat	93456789	1992-07-30
204	Khalid Al Riyami	Sabab	94567890	1988-02-15
205	Huda Al Hashmi	Muscat	95678901	1995-09-25

2. Display customer full name, phone, and membership start date.



The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The Object Explorer on the left displays the database structure. The central query window shows the following SQL query:

```
SELECT cus_name, cus_phone_num, BD  
FROM Customer;
```

The Results pane displays the output of the query, showing 5 rows of customer data:

cus_name	cus_phone_num	BD
Noura Al Maslan	91234567	1990-05-12
Sultan Al Farsi	92345678	1985-11-20
Layla Al Lami	93456789	1992-07-30
Khalid Al Riyami	94567890	1988-02-15
Huda Al Hashmi	95678901	1995-09-25

3. Display each loan ID, amount, and type.

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The Object Explorer on the left displays the database structure for 'BankingSystem'. The central query window contains the following SQL query:

```
SELECT loan_ID, loan_amount, loan_type
FROM Loan;
```

The Results pane at the bottom displays the output of the query, showing 5 rows of data:

loan_ID	loan_amount	loan_type
3001	5000.00	Personal Loan
3002	20000.00	Car Loan
3003	15000.00	Home Loan
3004	7000.00	Education Loan
3005	12000.00	Business Loan

4. Display account number and annual interest (5% of balance) as AnnualInterest.

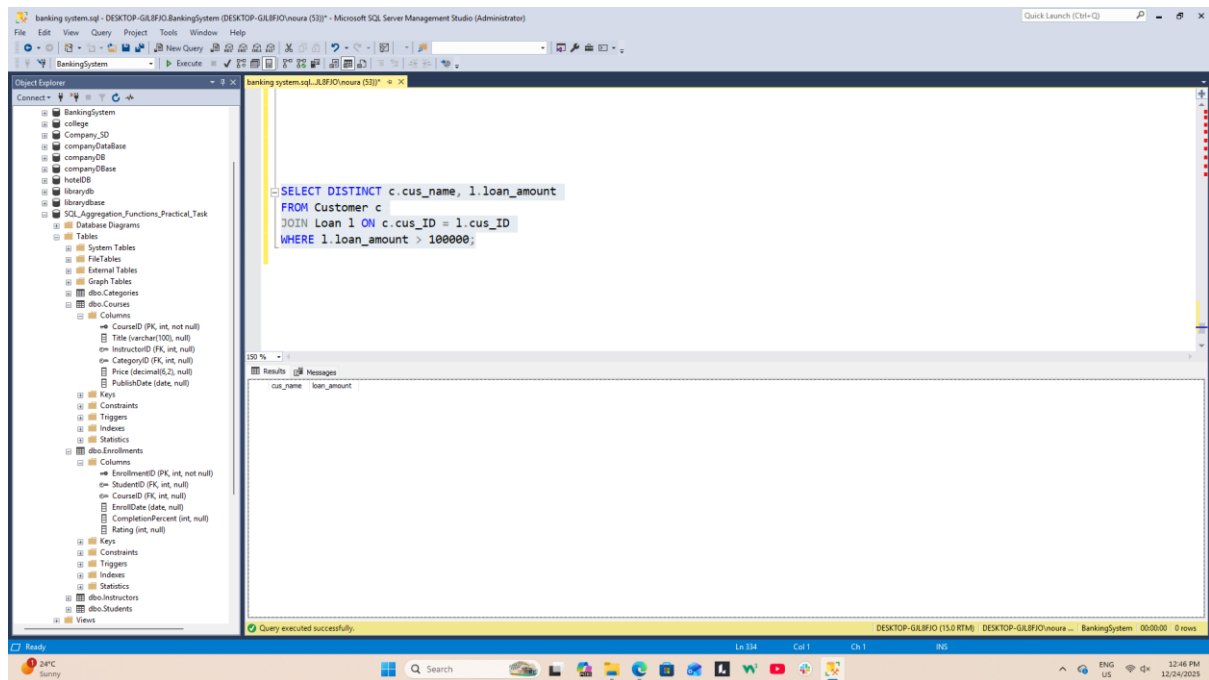
The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The Object Explorer on the left displays the database structure for 'BankingSystem'. The central query window contains the following SQL query:

```
SELECT
acc_num,
balance * 0.05 AS AnnualInterest
FROM Account;
```

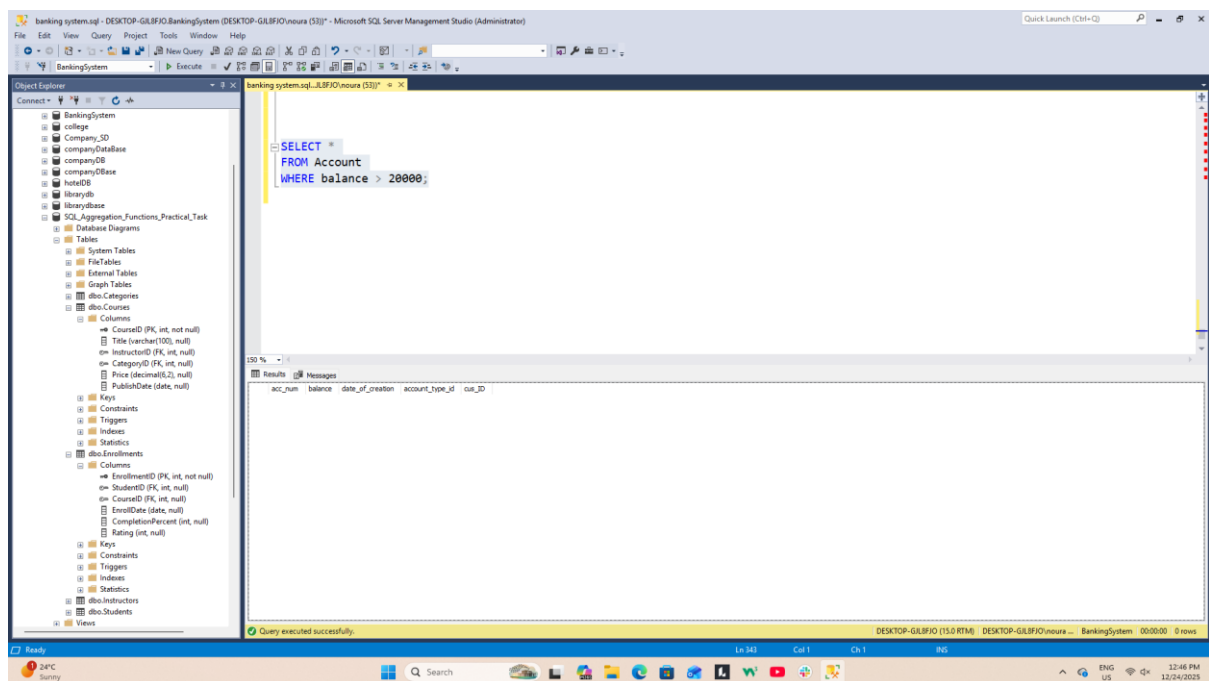
The Results pane at the bottom displays the output of the query, showing 5 rows of data:

acc_num	AnnualInterest
3001	250.0000
3002	1000.0000
3003	750.0000
3004	350.0000
3005	600.0000

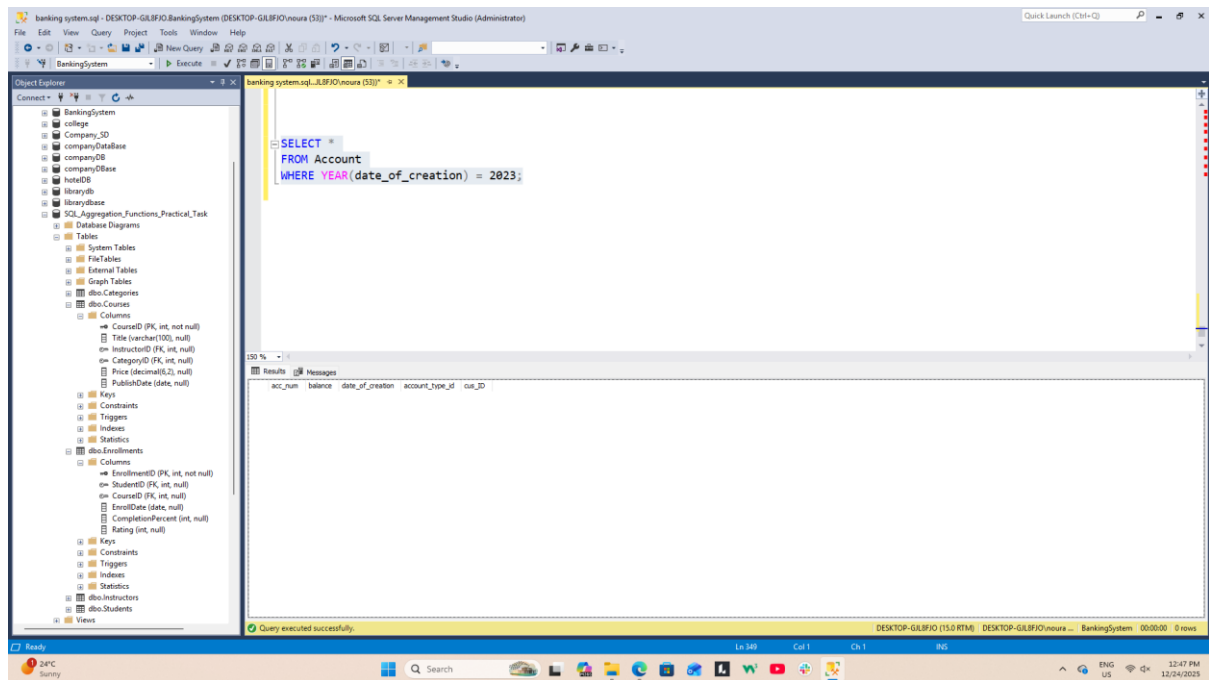
5. List customers with loan amounts greater than 100000 LE.



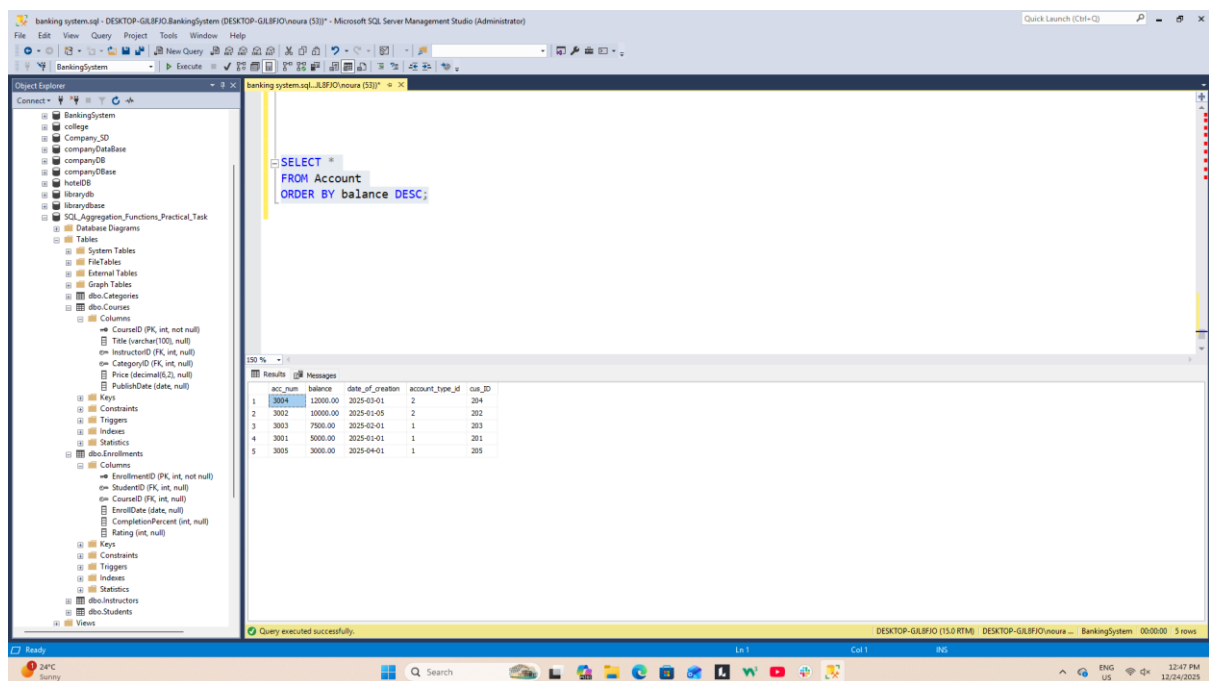
6. List accounts with balances above 20000.



7. Display accounts opened in 2023.



8. Display accounts ordered by balance descending.



9. Display the maximum, minimum, and average account balance.

banking system.sql - DESKTOP-GILBFO\BankingSystem (DESKTOP-GILBFO\noursa (33)) - Microsoft SQL Server Management Studio (Administrator)

Object Explorer

- BankingSystem
 - College
 - Company_3D
 - companyDatabase
 - companyDB
 - companyDBase
 - hotelDB
 - librarydb
 - librarydbase
 - SQL_Aggregation_Functions_Practical_Task
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.Categories
 - dbo.Courses
 - Columns
 - CourseID (PK, int, not null)
 - Title (varchar(100), null)
 - InstructorID (FK, int, null)
 - CategoryID (FK, int, null)
 - Price (decimal(6,2), null)
 - PublicationDate (date, null)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - dbo.Enrollments
 - Columns
 - EnrollmentID (PK, int, not null)
 - StudentID (FK, int, null)
 - CourseID (FK, int, null)
 - EnrollDate (date, null)
 - CompletionPercent (int, null)
 - Rating (int, null)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - dbo.Instructors
 - dbo.Students

Query Editor

```
SELECT
MAX(balance) AS MaxBalance,
MIN(balance) AS MinBalance,
AVG(balance) AS AvgBalance
FROM Account;
```

Results

	MaxBalance	MinBalance	AvgBalance
1	12000.00	3000.00	7500.000000

Query executed successfully.

DESKTOP-GILBFO (15.0 RTM) | DESKTOP-GILBFO\noursa ... | BankingSystem | 00:00:00 | 1 rows

10. Display total number of customers.

banking system.sql - DESKTOP-GILBFO\BankingSystem (DESKTOP-GILBFO\noursa (33)) - Microsoft SQL Server Management Studio (Administrator)

Object Explorer

- BankingSystem
 - College
 - Company_3D
 - companyDatabase
 - companyDB
 - companyDBase
 - hotelDB
 - librarydb
 - librarydbase
 - SQL_Aggregation_Functions_Practical_Task
 - Database Diagrams
 - Tables
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 - dbo.Categories
 - dbo.Courses
 - Columns
 - CourseID (PK, int, not null)
 - Title (varchar(100), null)
 - InstructorID (FK, int, null)
 - CategoryID (FK, int, null)
 - Price (decimal(6,2), null)
 - PublicationDate (date, null)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - dbo.Enrollments
 - Columns
 - EnrollmentID (PK, int, not null)
 - StudentID (FK, int, null)
 - CourseID (FK, int, null)
 - EnrollDate (date, null)
 - CompletionPercent (int, null)
 - Rating (int, null)
 - Keys
 - Constraints
 - Triggers
 - Indexes
 - Statistics
 - dbo.Instructors
 - dbo.Students

Query Editor

```
SELECT COUNT(*) AS TotalCustomers
FROM Customer;
```

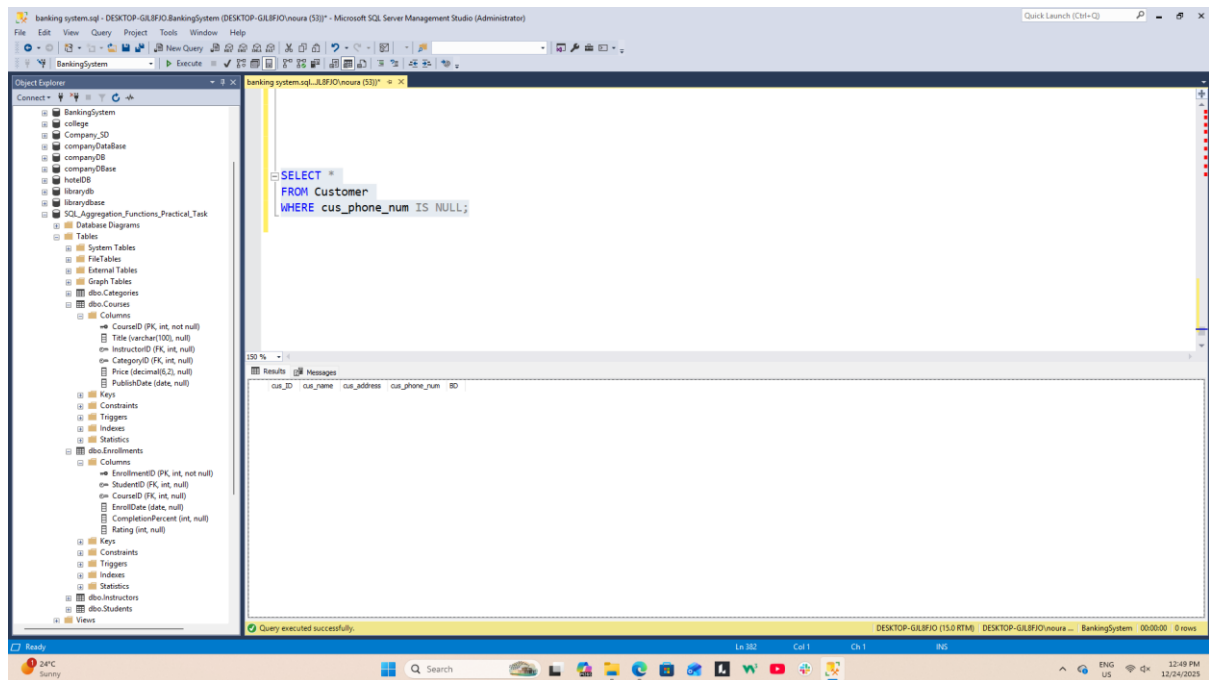
Results

	TotalCustomers
1	5

Query executed successfully.

DESKTOP-GILBFO (15.0 RTM) | DESKTOP-GILBFO\noursa ... | BankingSystem | 00:00:00 | 1 rows

11. Display customers with NULL phone numbers.



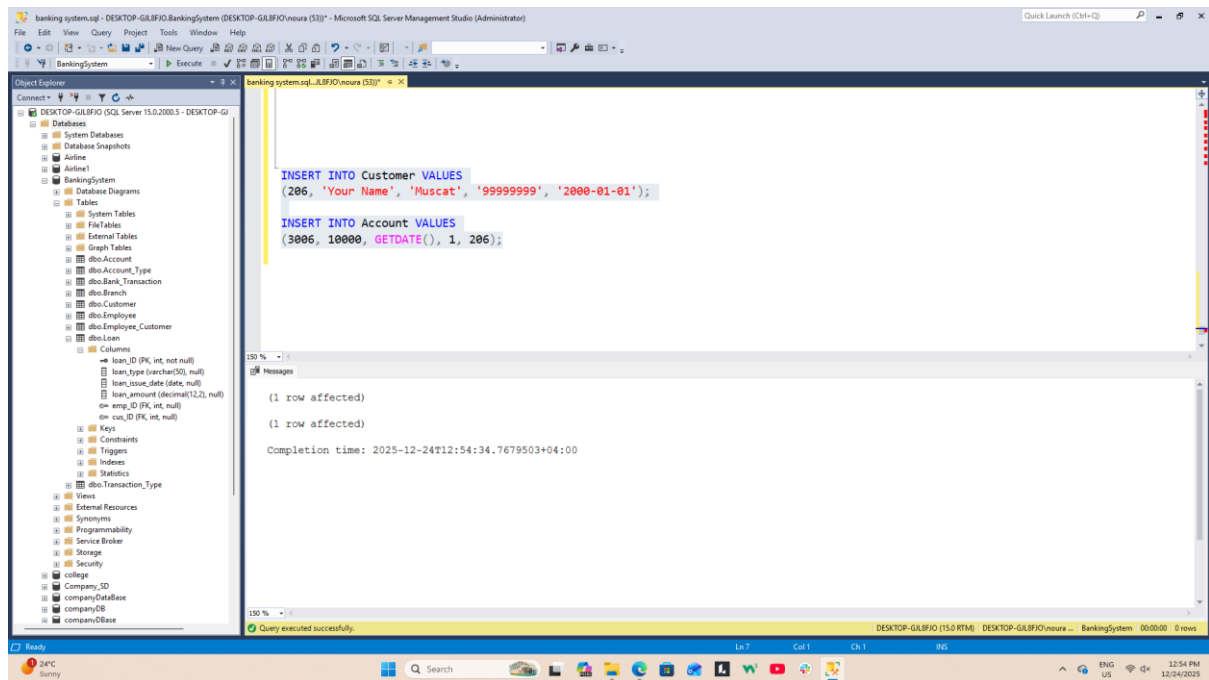
12. Display loans with duration greater than 10 years.

This query **cannot be executed** because the database does not store loan duration or loan end date.

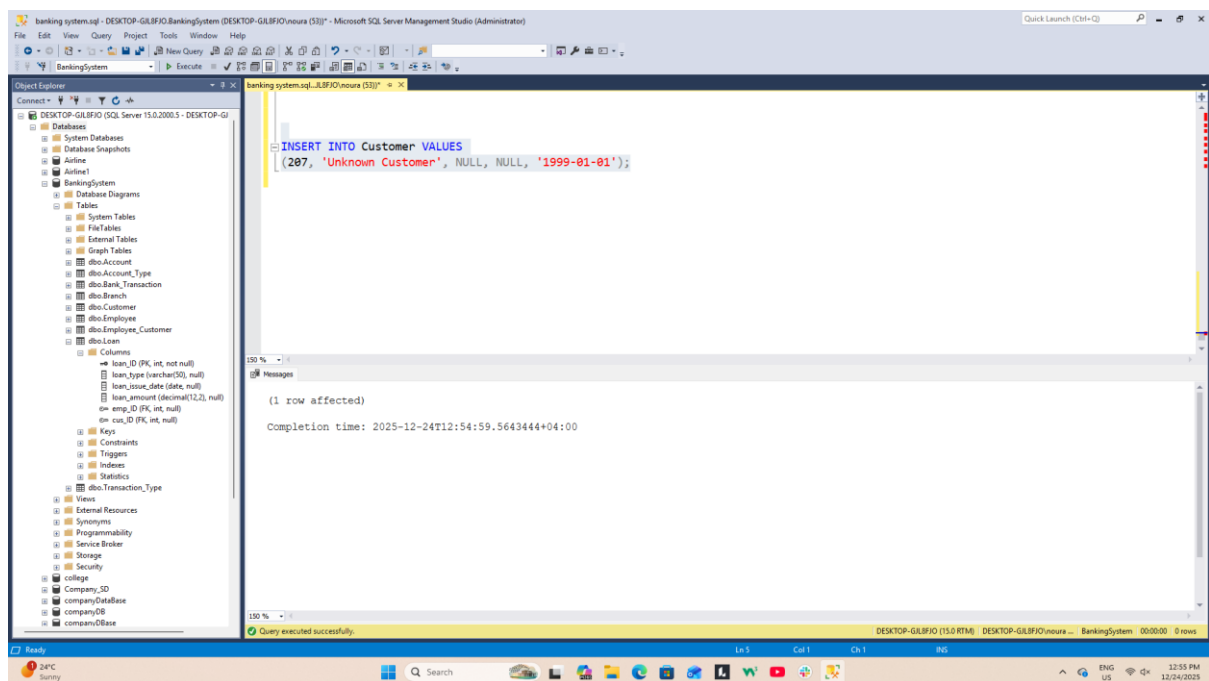
No duration column

DML

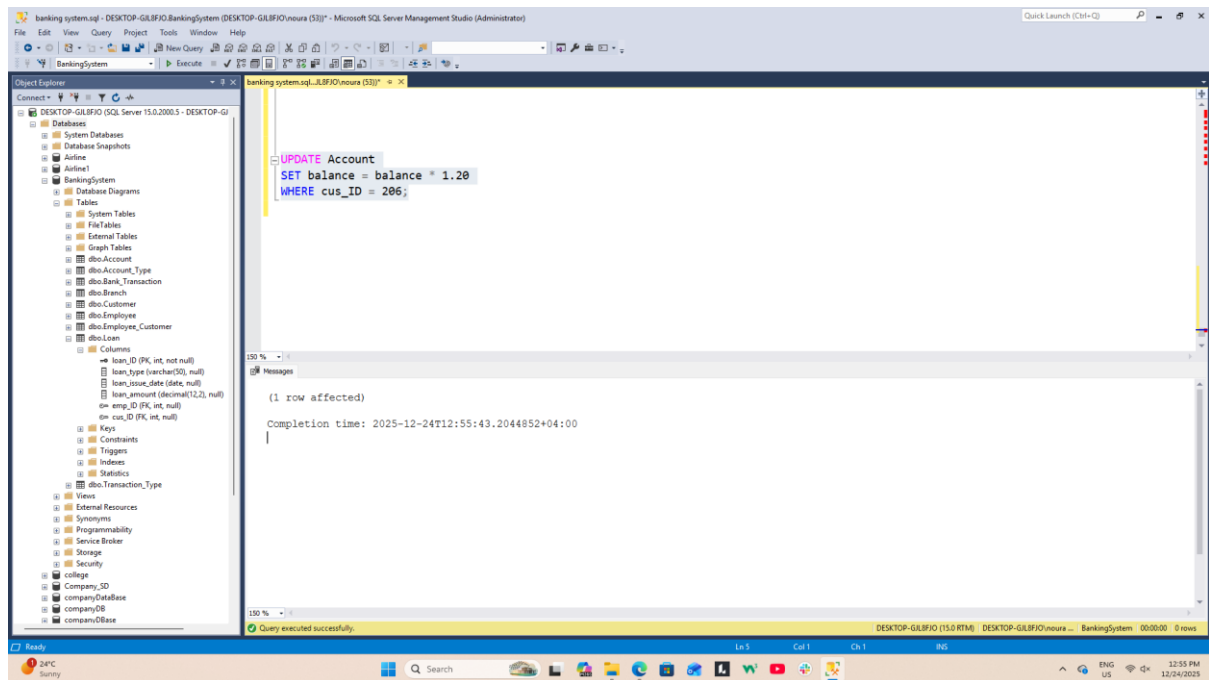
13. Insert yourself as a new customer and open an account with balance 10000.



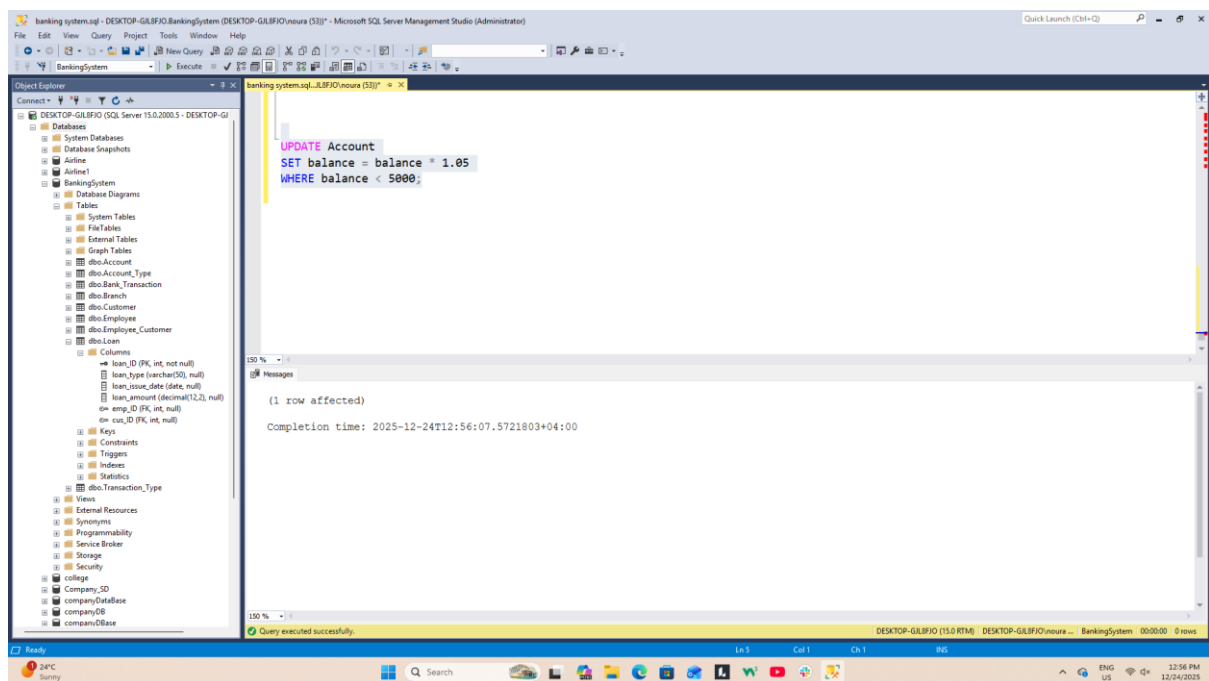
14. Insert another customer with NULL phone and address.



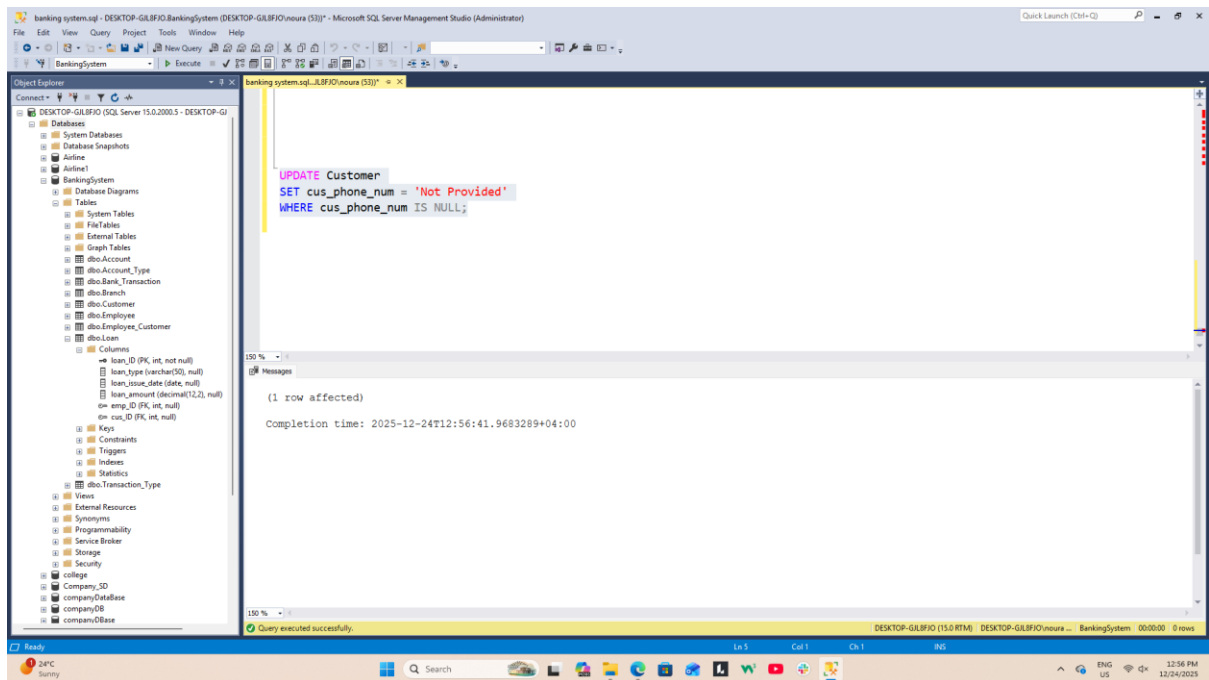
15. Increase your account balance by 20%.



16. Increase balance by 5% for accounts with balance less than 5000.



17. Update phone number to 'Not Provided' where phone is NULL.



18. Delete closed accounts.

No column indicates closed accounts in your table.

□ Example (if a status column existed):

```
DELETE FROM Account
WHERE status = 'Closed';
```