**Banking System**

**Task 1:**

(Screenshots are attached with Task 2)

Create database HMBank

1. Creating Customers Table:

Create table customers(

Customer\_id int primary key,

First\_name varchar(20) not null,

Last\_name varchar(20),

DOB date,

Email varchar(40) not null,

Phone\_number varchar(15) not null,

Address varchar(100)

)

1. Create table accounts

Create table accounts(

Account\_id int primary key,

Customer\_id int,

Account\_type varchar(20),

Balance int,

Foreign key(customer\_id) references customers(customer\_id)

)

1. Create table Transactions

Create table transactions(

Transaction\_id int primary key,

Account\_id int,

Transaction\_type varchar(20),

Amount int,

Transaction\_date date,

Foreign key(account\_id) references accounts(account\_id)

)

Entity Relationship Diagram :

Customers 1 \*. Accounts 1 \* Transactions

Customer\_id account\_id transaction\_id

First\_name customer\_id account\_id

Last\_name account\_type transaction\_type

DOB balance amount

Email transaction\_date

Phone\_number

Address

**Task 2:**

**1)Inserting into Customers Table:**

Insert into customers values (1001, ‘Afiya’, ‘Farheen’, ‘2003-11-29’, ‘afiyafarheen@gmail.com’, 987654321, ‘21, new street, ramapuram, chennai’)

Insert into customers values (1002, ‘Laresh’, ‘Kumar’, ‘2003-03-30’, ‘lareshkumar@gmail.com’,9878363728,’10, andavar nagar, villivakkam, Chennai’)

Insert into customers values (1003, ‘Rudravel’, ‘sankar’, ‘2004-08-24’, ‘rudravelsankar@gmail.com’,6373828288,’23, church street, Bangalore’)

Insert into customers values (1004, ‘Priyanka’, ‘Mohan’, ‘2003-10-25’, ‘priyankamohan@gmail.com’,8972627828,’2, st thomas mount, Chennai’)

Insert into customers values (1005,’Maya’,’Krishnan’, ‘2004-12-04’,’mayakrishnan@gmail.com’,7894523567,’21, royapettah, Chennai’)

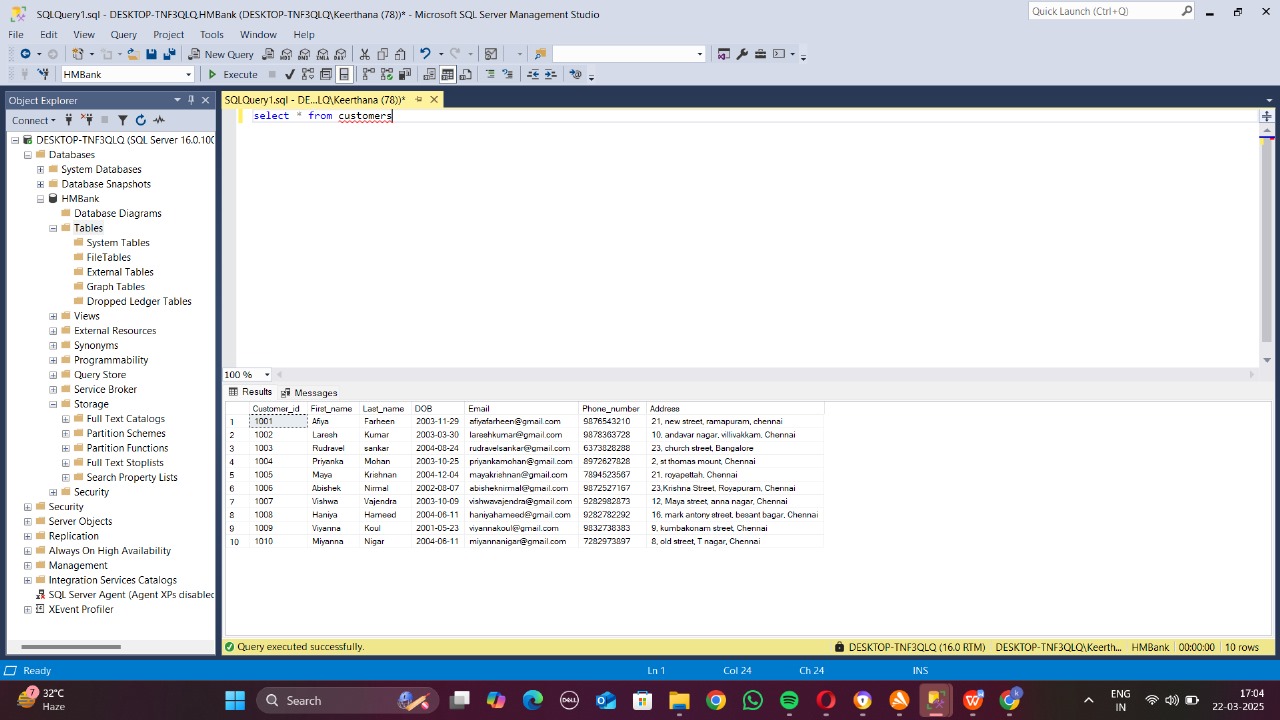
Insert into customers values (1006, ‘Abishek’,’Nirmal’,’2002-08-07’,’abisheknirmal@gmail.com’,9872527167,’23,Krishna Street, Royapuram, Chennai’)

Insert into customers values (1007, ‘Vishwa’,’Vajendra’,’2003-10-09’,’vishwavajendra@gmail.com’,9282982873,’12, Maya street, anna nagar, Chennai’)

Insert into customers values (1008,’Haniya’,’Hameed’,’2004-06-11’,’haniyahameed@gmail.com’,9282782292,’16, mark antony street, besant bagar, Chennai’)

Insert into customers values (1009,’Viyanna’,’Koul’,’2001-05-23’,’viyannakoul@gmail.com’,9832738383,’9, kumbakonam street, Chennai’)

Insert into customers values (1010,’Miyanna’,’Nigar’,’2004-06-11’,’miyannanigar@gmail.com’,7282973897,’8, old street, T nagar, Chennai’)



**Inserting into Accounts Table:**

Insert into Accounts values (1230,1001,’savings’,20000)

Insert into accounts values (1231,1002,’zero\_balance’,25000)

Insert into accounts values (1232,1003,’current’,30000)

Insert into accounts values (1233,1004,’savings’,35000)

Insert into accounts values (1234,1005,’zero\_balance’,15000)

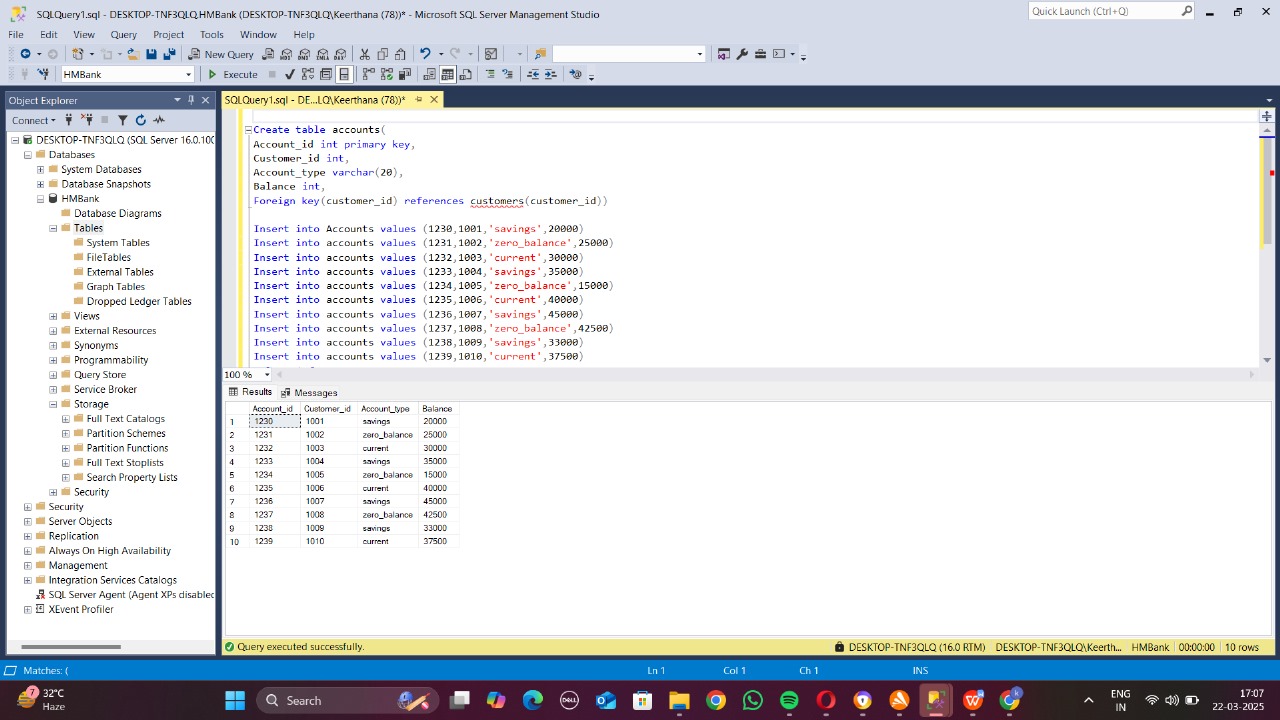
Insert into accounts values (1235,1006,’current’,40000)

Insert into accounts values (1236,1007,’savings’,45000)

Insert into accounts values (1237,1008,’zero\_balance’,42500)

Insert into accounts values (1238,1009,’savings’,33000)

Insert into accounts values (1239,1010,’current’,37500)



**Inserting into Transactions Table:**

Insert into transactions values (0034,1230,’deposit’,20000,’2025-03-16’)

Insert into transactions values (0035,1231,’withdrawal’,15000,’2025-02-12’)

Insert into transactions values (0036,1232,’transfer’,5000,’2025-01-13’)

Insert into transactions values (0037,1233,’transfer’,2500,’2025-02-25’)

Insert into transactions values (0038,1234,’withdrawal’,1500,’2025-01-20’)

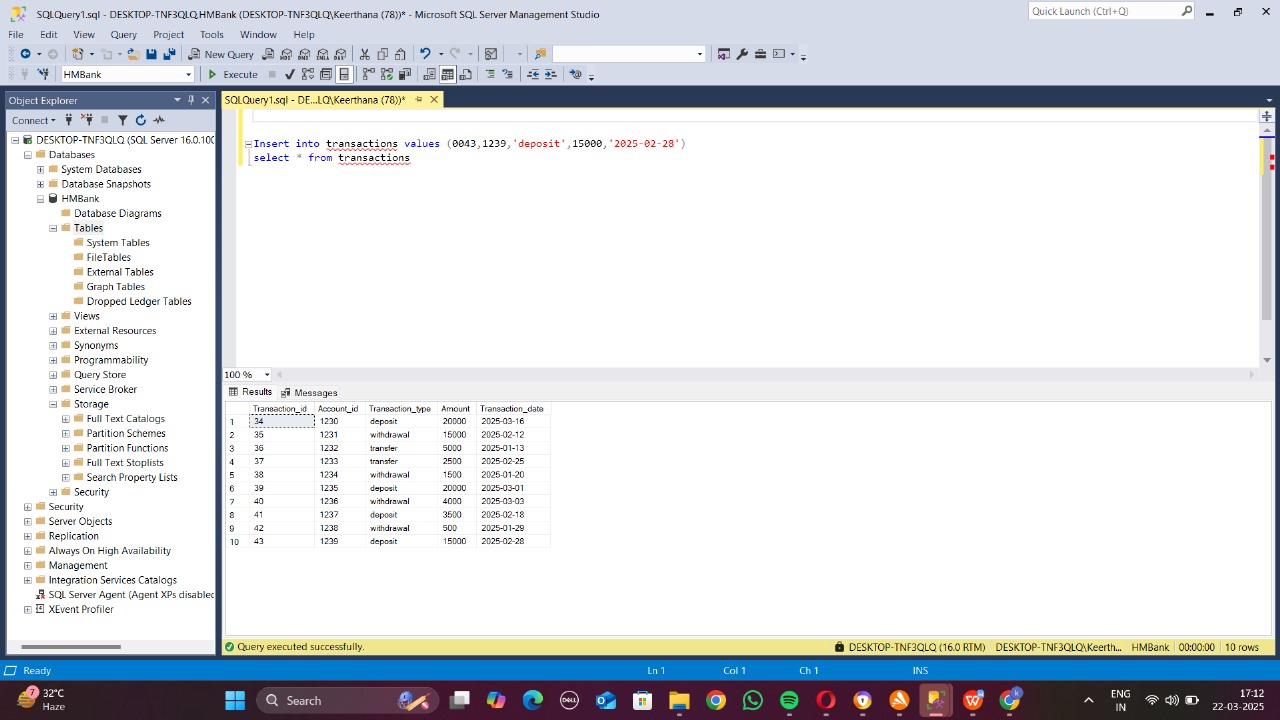
Insert into transactions values (0039,1235,’deposit’,20000,’2025-03-01’)

Insert into transactions values (0040,1236,’withdrawal’,4000,’2025-03-03’)

Insert into transactions values (0041,1237,’deposit’,3500,’2025-02-18’)

Insert into transactions values (0042,1238,’withdrawal’,500,’2025-01-29’)

Insert into transactions values (0043,1239,’deposit’,15000,’2025-02-28’)

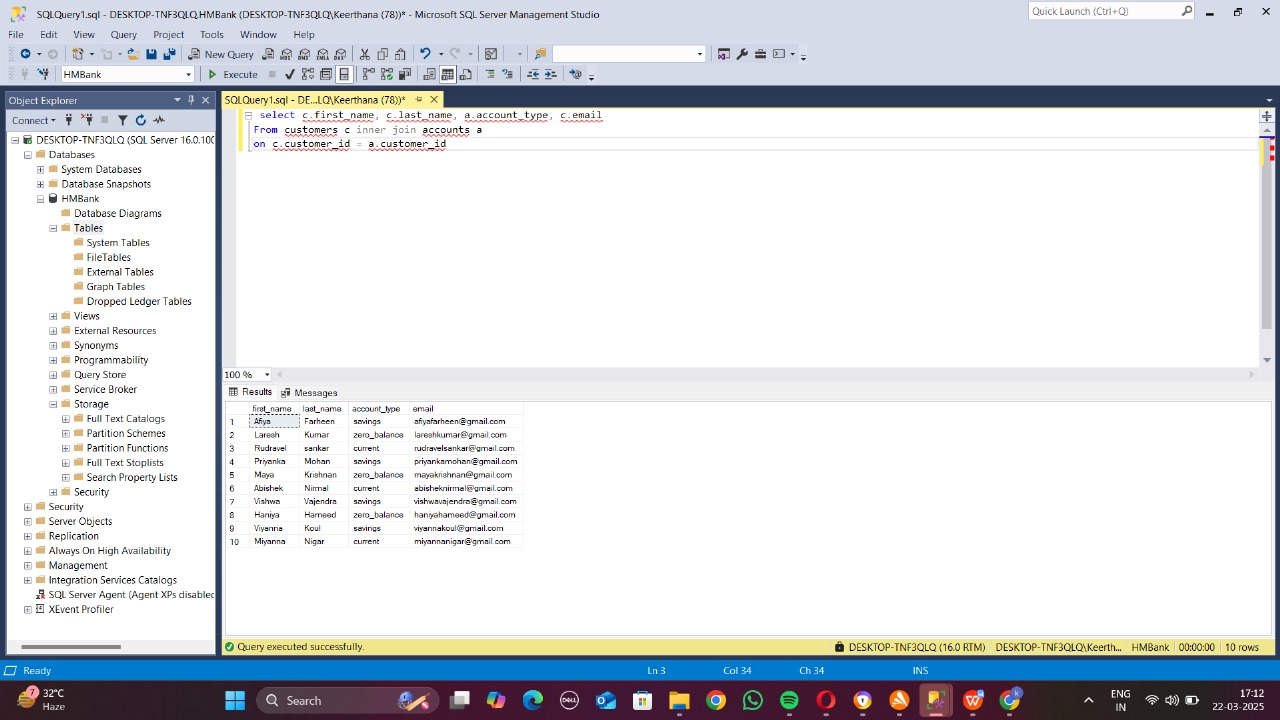


2)SQL Queries

1) select c.first\_name, c.last\_name, a.account\_type, c.email

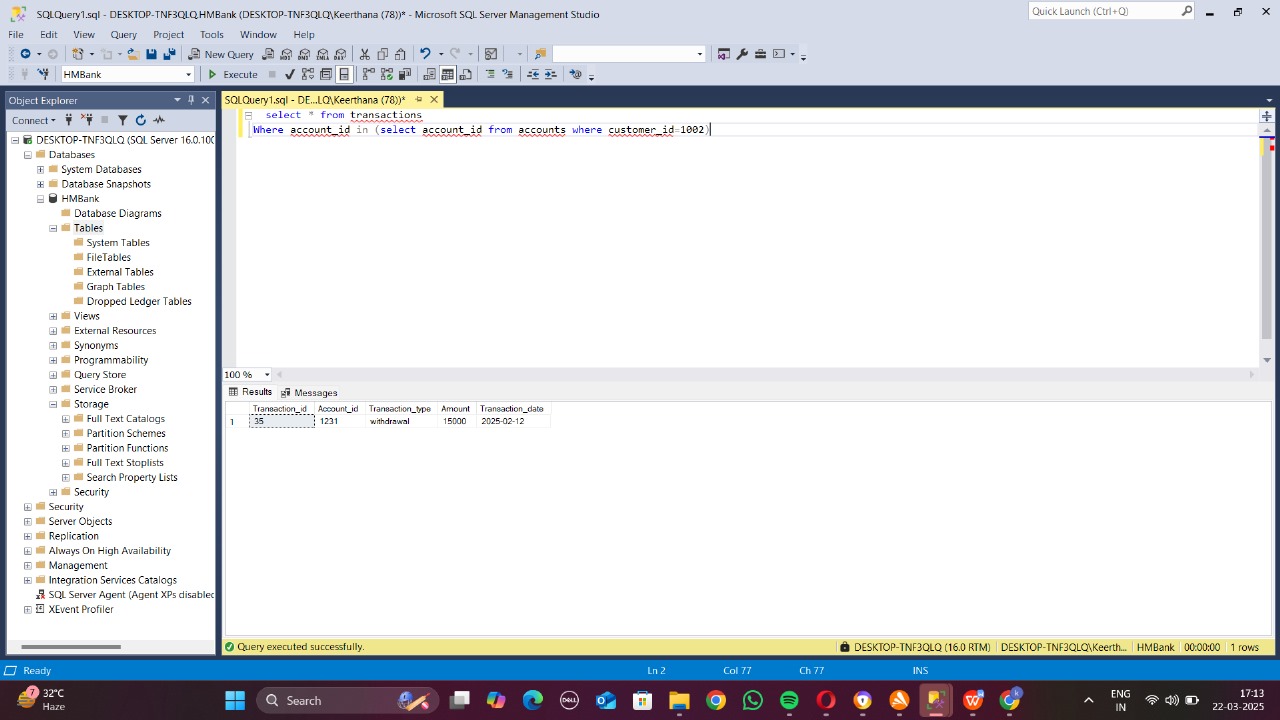
From customers c inner join accounts a

on c.customer\_id = a.customer\_id



2) select \* from transactions

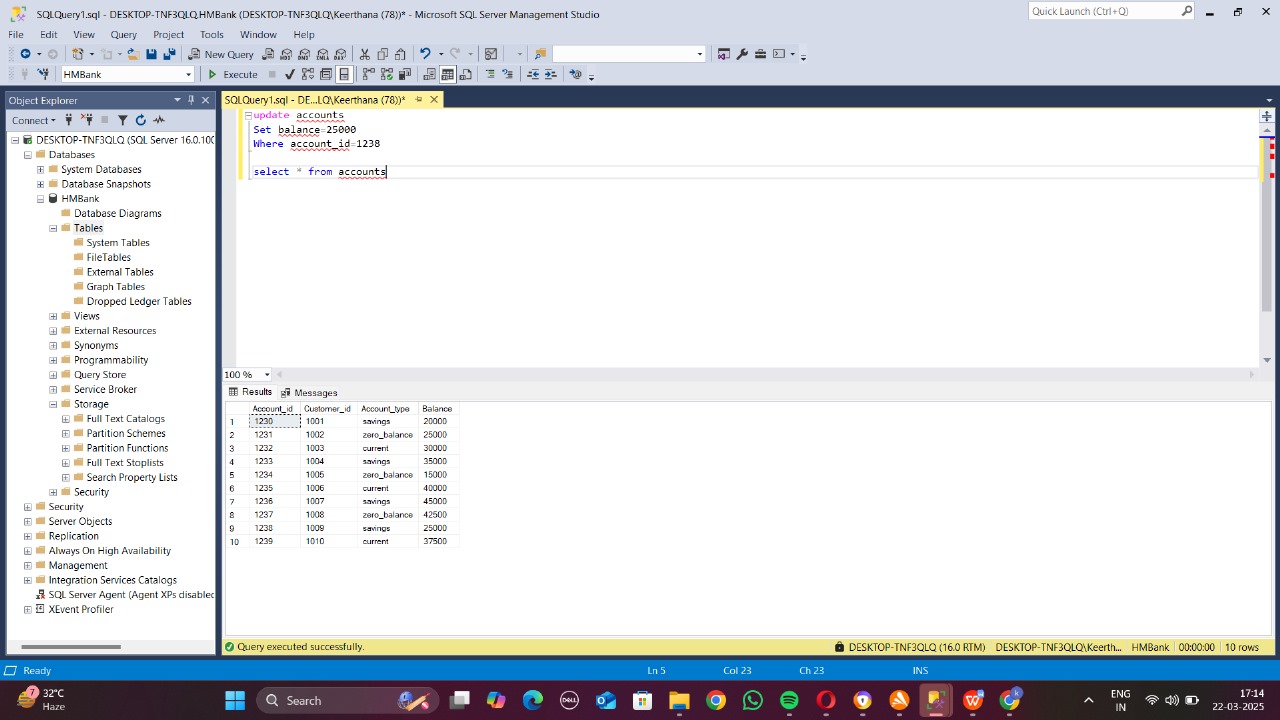
Where account\_id in (select account\_id from accounts where customer\_id=1002)



3) update accounts

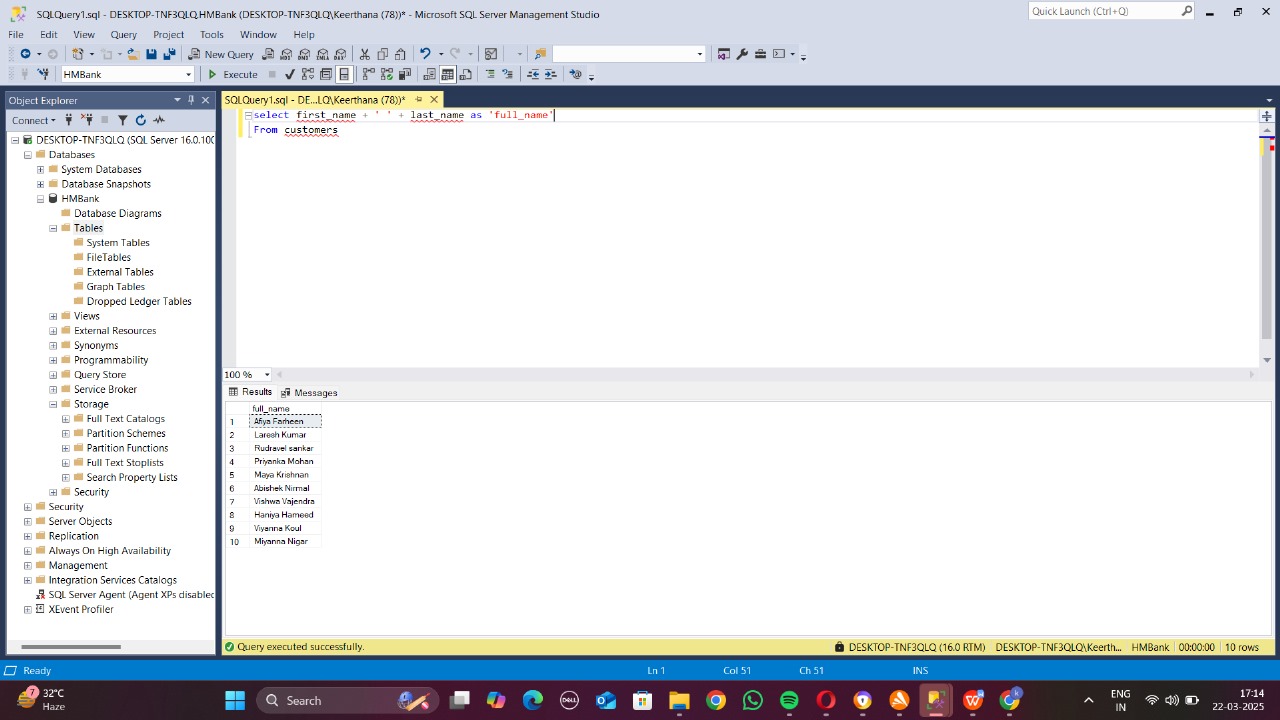
Set balance=25000

Where account\_id=1238



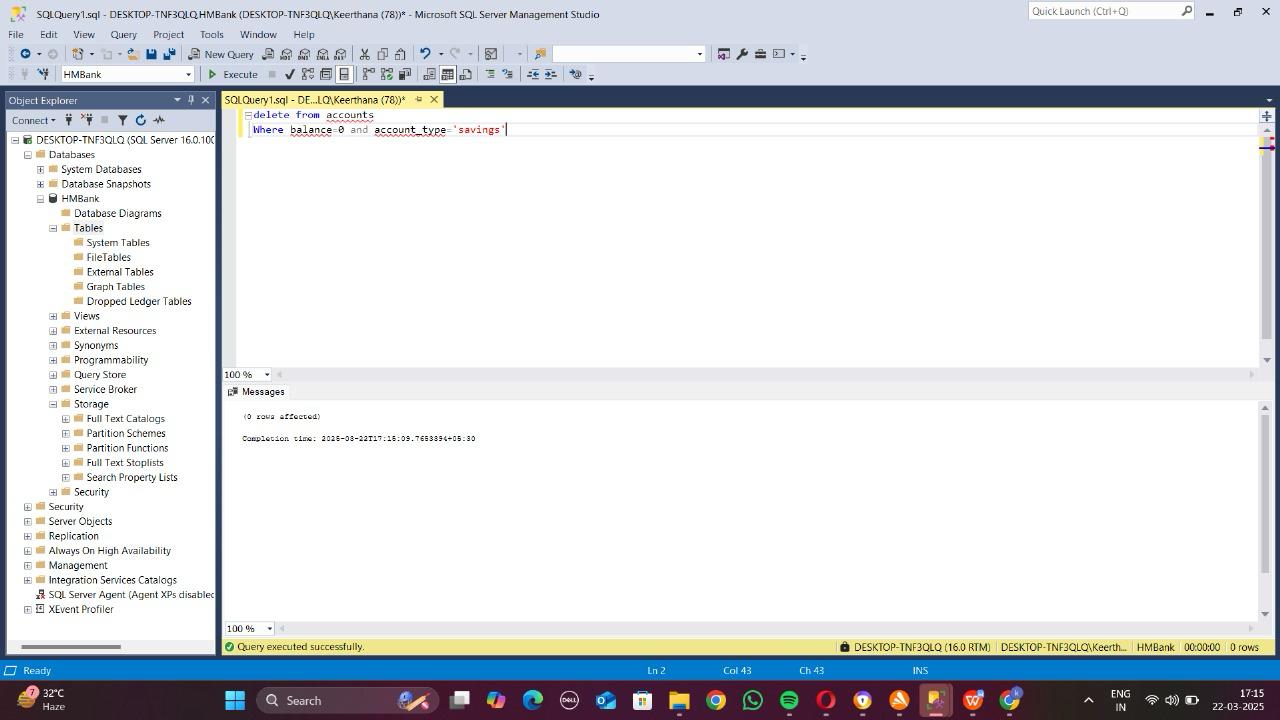
4)select first\_name + ‘ ‘ + last\_name as ‘full\_name’

From customers



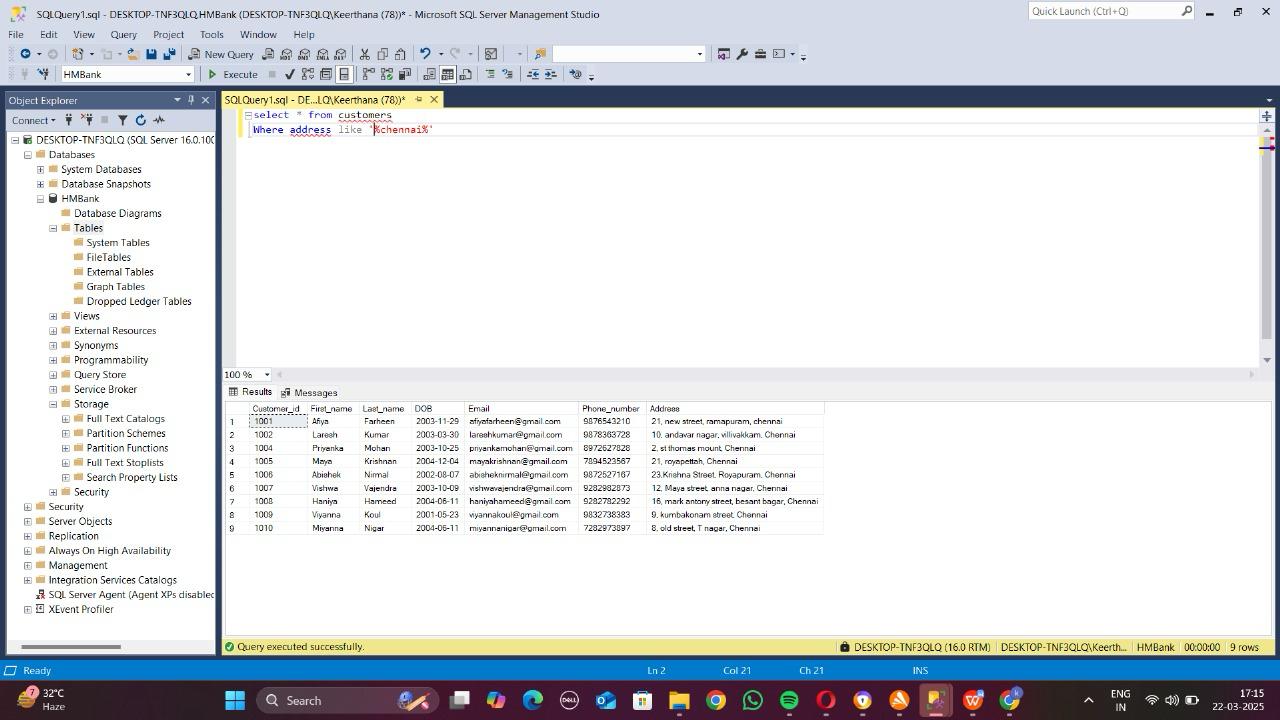
5)delete from accounts

Where balance=0 and account\_type=’savings’



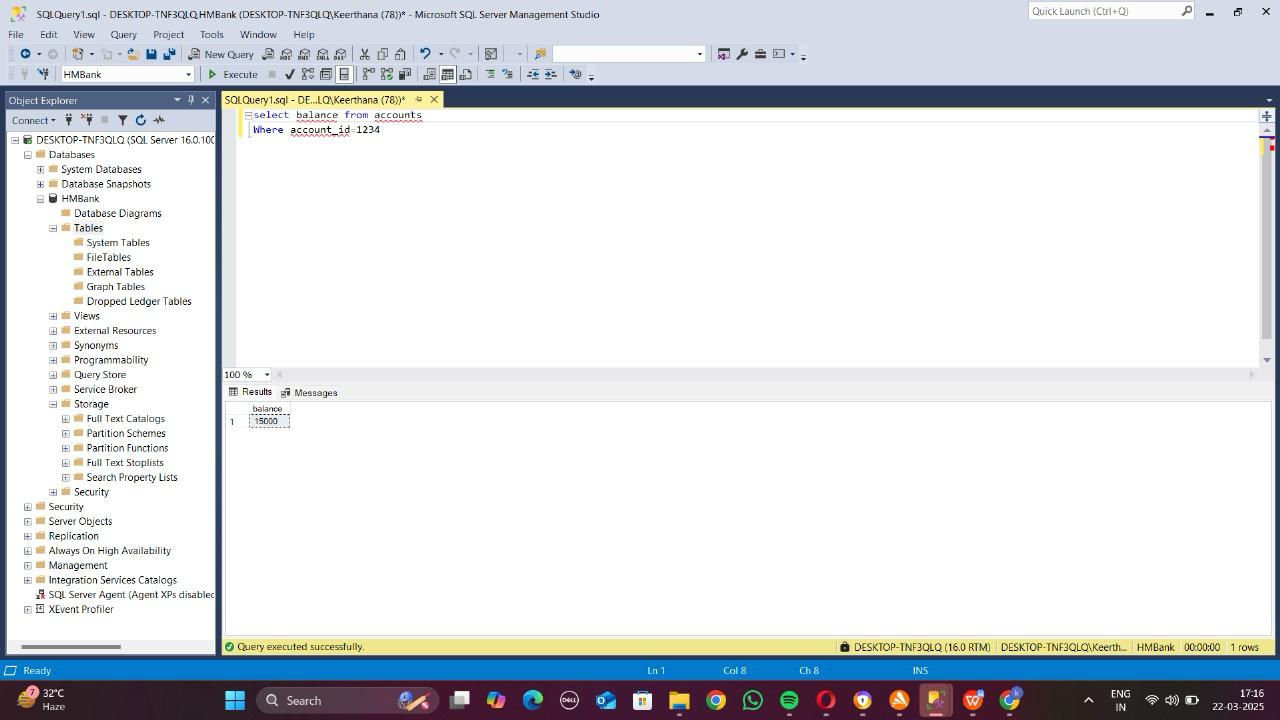
6)select \* from customers

Where address like ‘%chennai%’



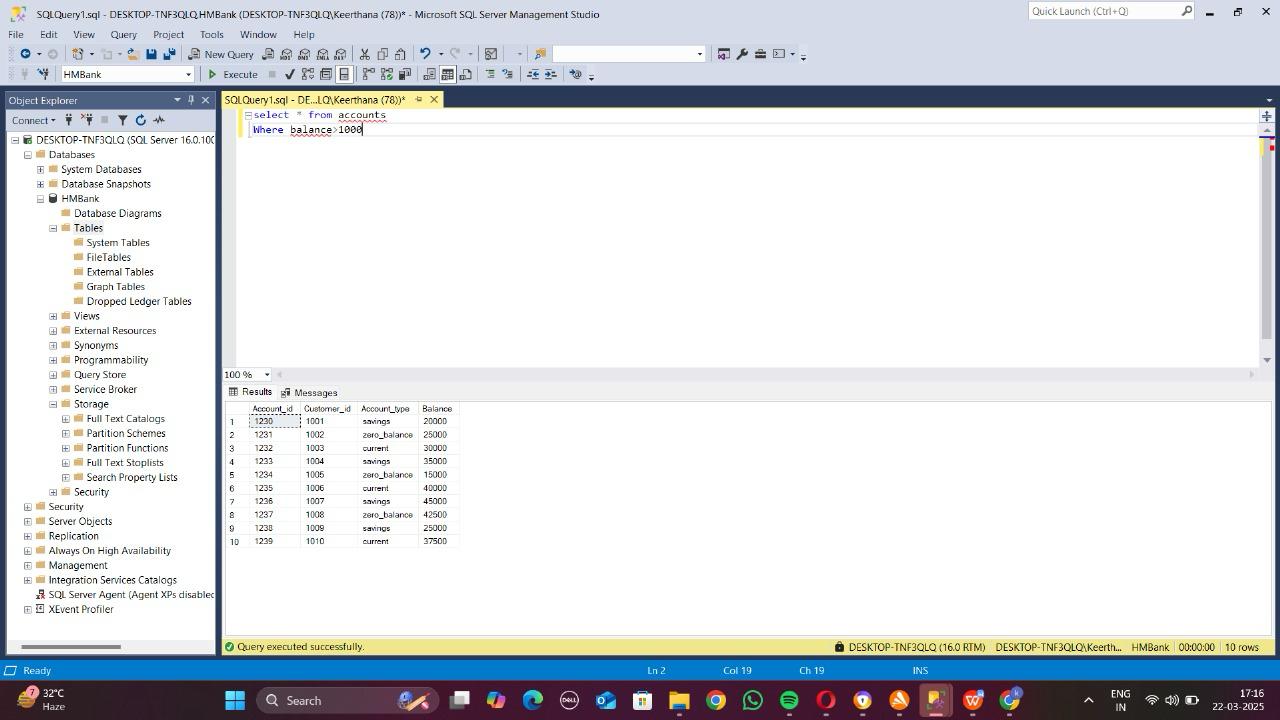
7)select balance from accounts

Where account\_id=1234



8)select \* from accounts

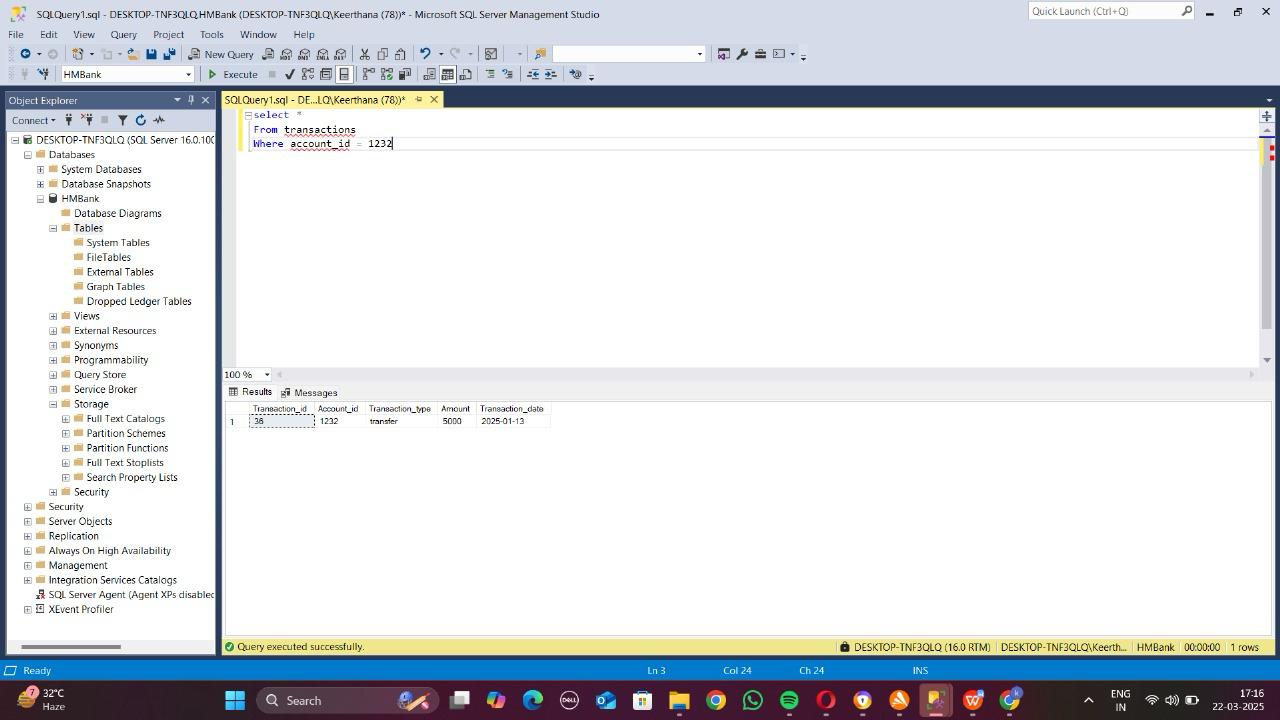
Where balance>1000



9) select \*

From transactions

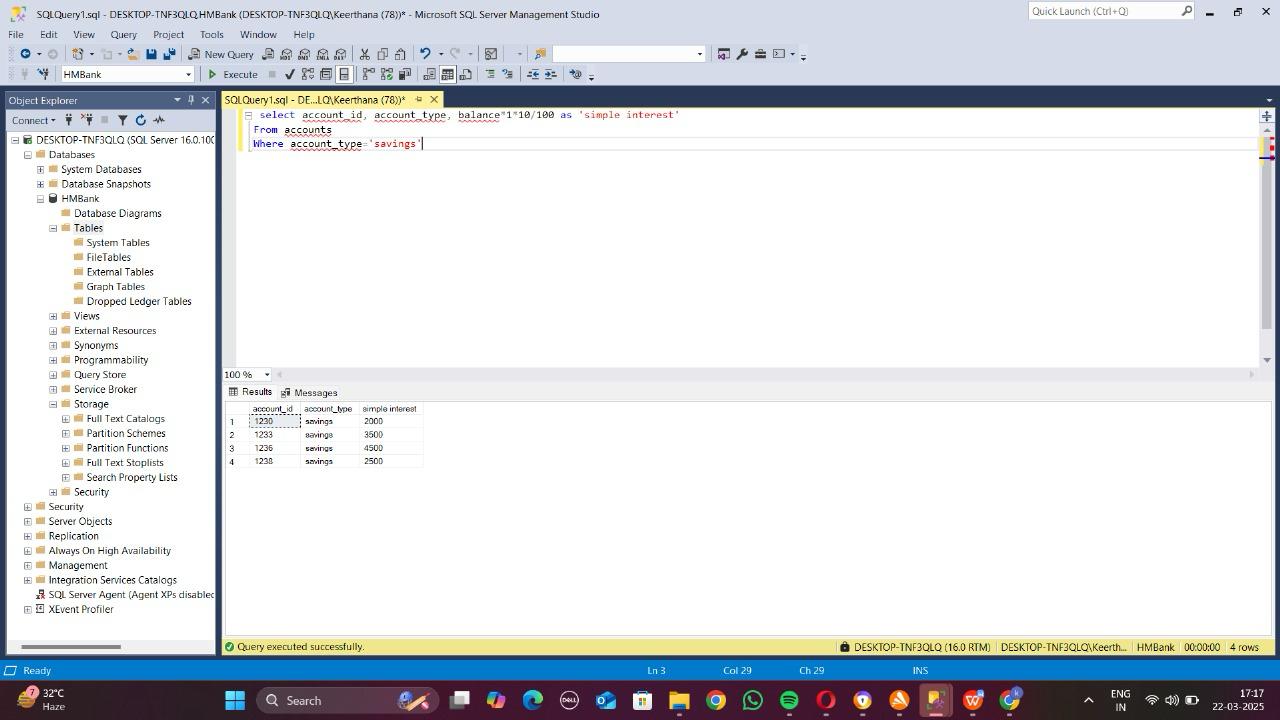
Where account\_id = 1232



10) select account\_id, account\_type, balance\*1\*10/100 as ‘simple interest’

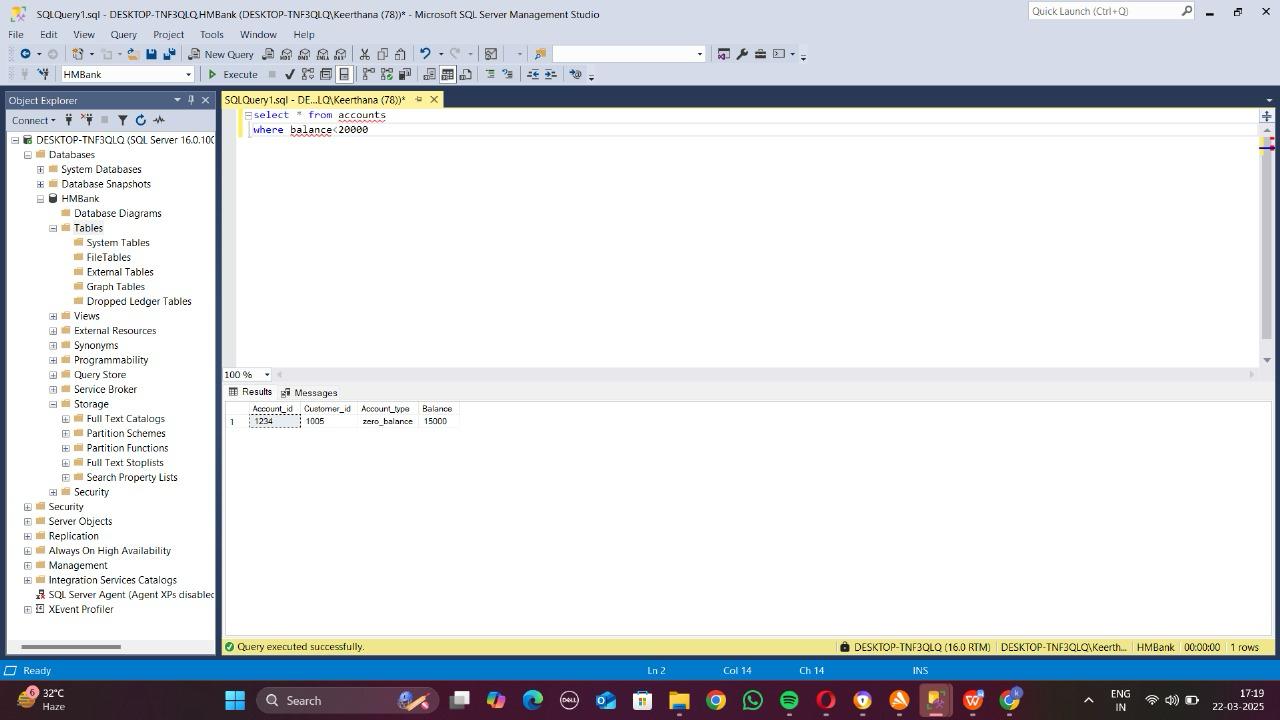
From accounts

Where account\_type=’savings’



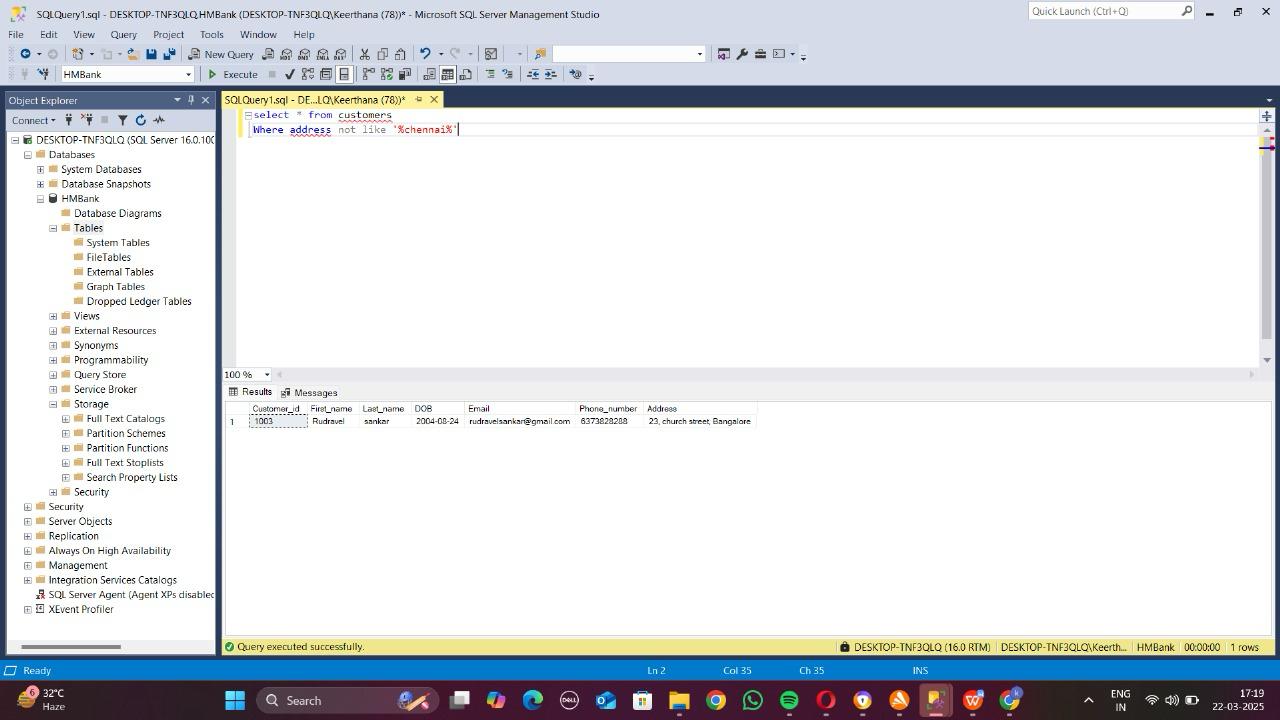
11) select \* from accounts

Where balance<20000



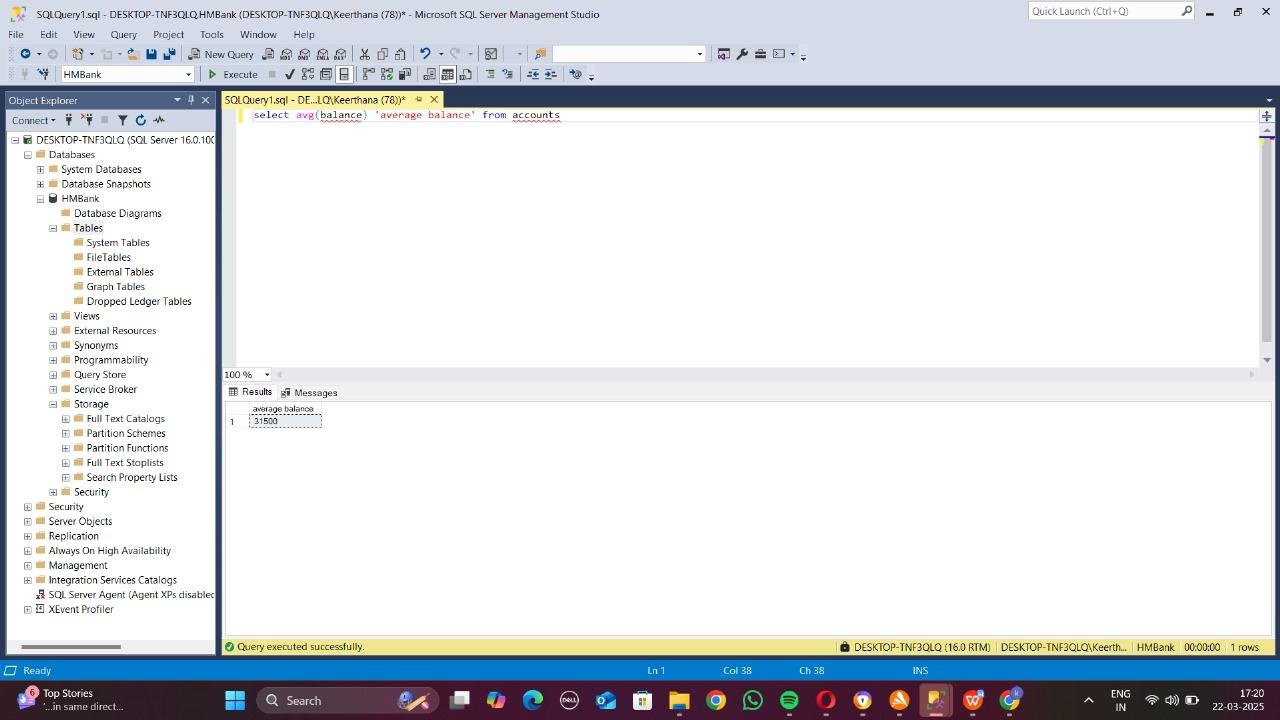
12) select \* from customers

Where address not like ‘%chennai%’



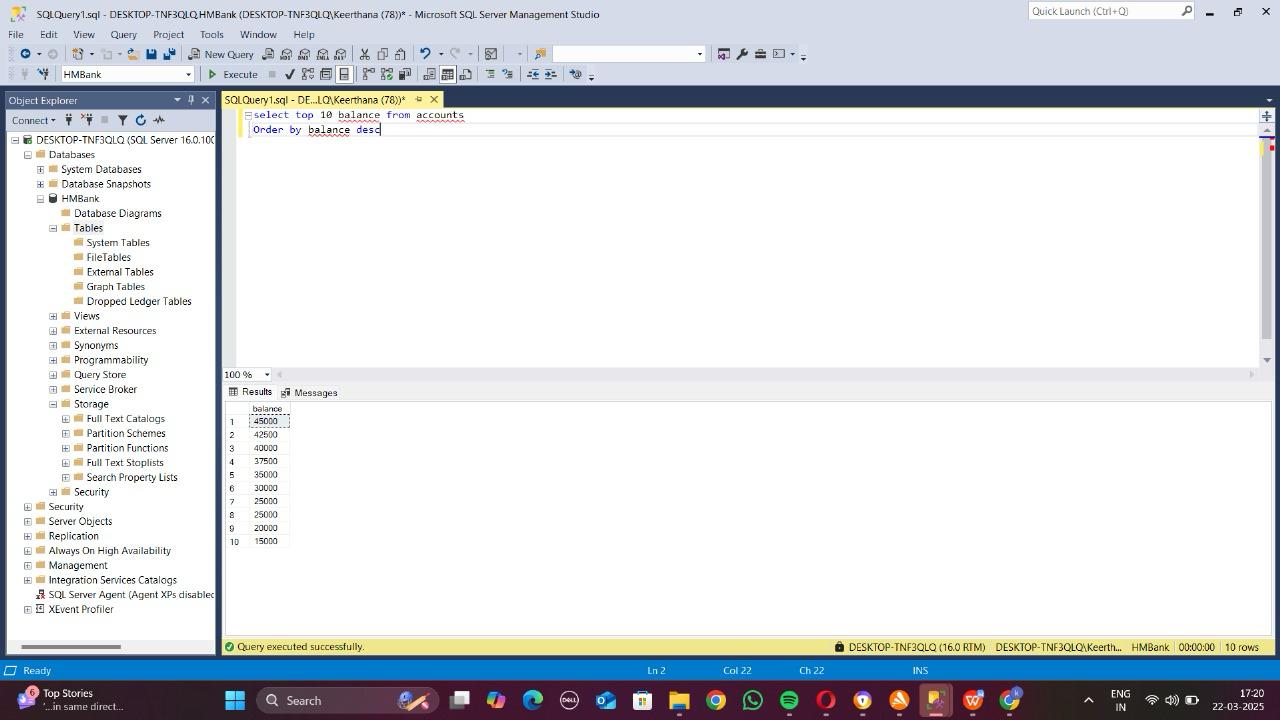
**Task 3:**

1)select avg(balance) ‘average balance’ from accounts



2)select top 10 balance from accounts

Order by balance desc

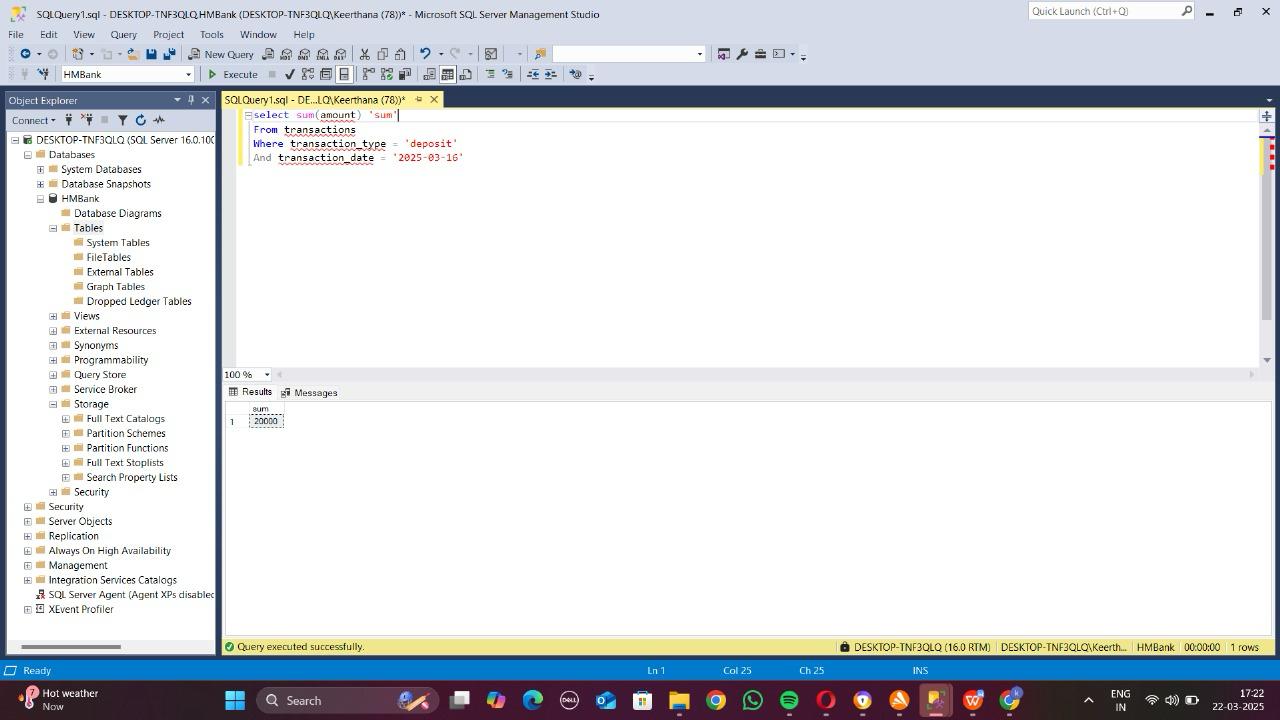


3)select sum(amount) ‘sum’

From transactions

Where transaction\_type = ‘deposit’

And date = ‘2025-10-23’

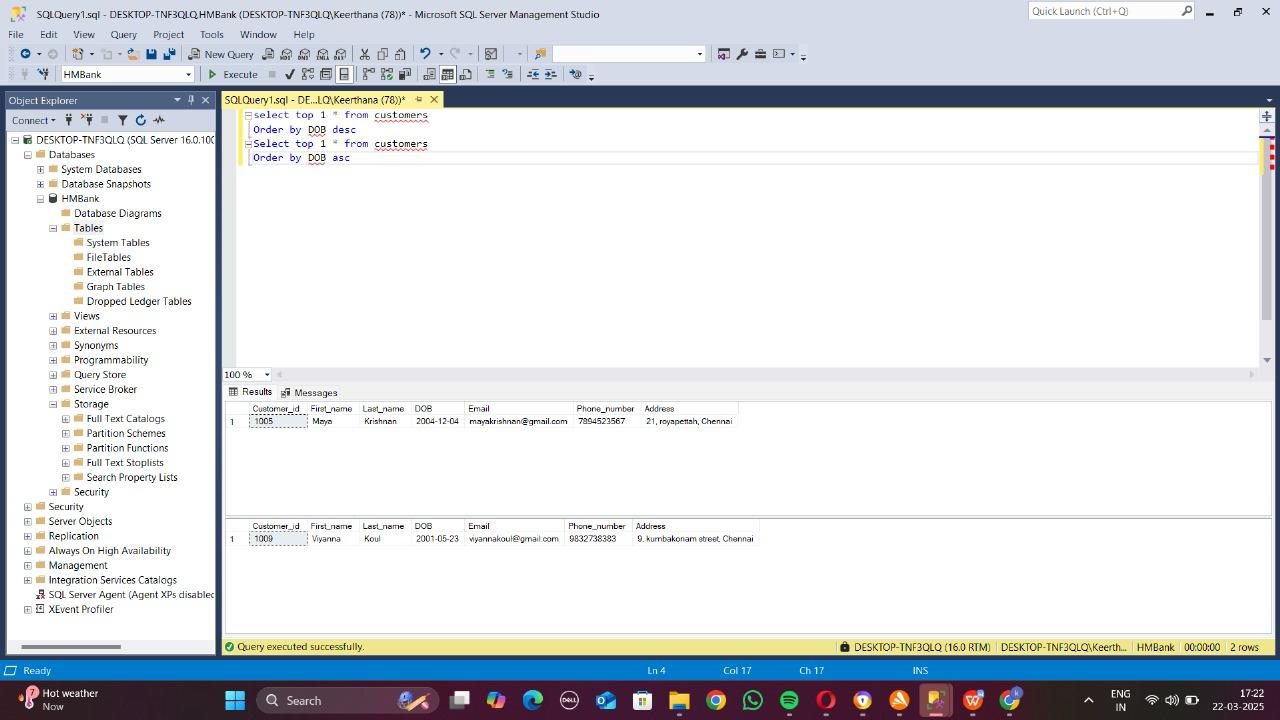


4)select top 1 \* from customers

Order by DOB desc

Select top 1 \* from customers

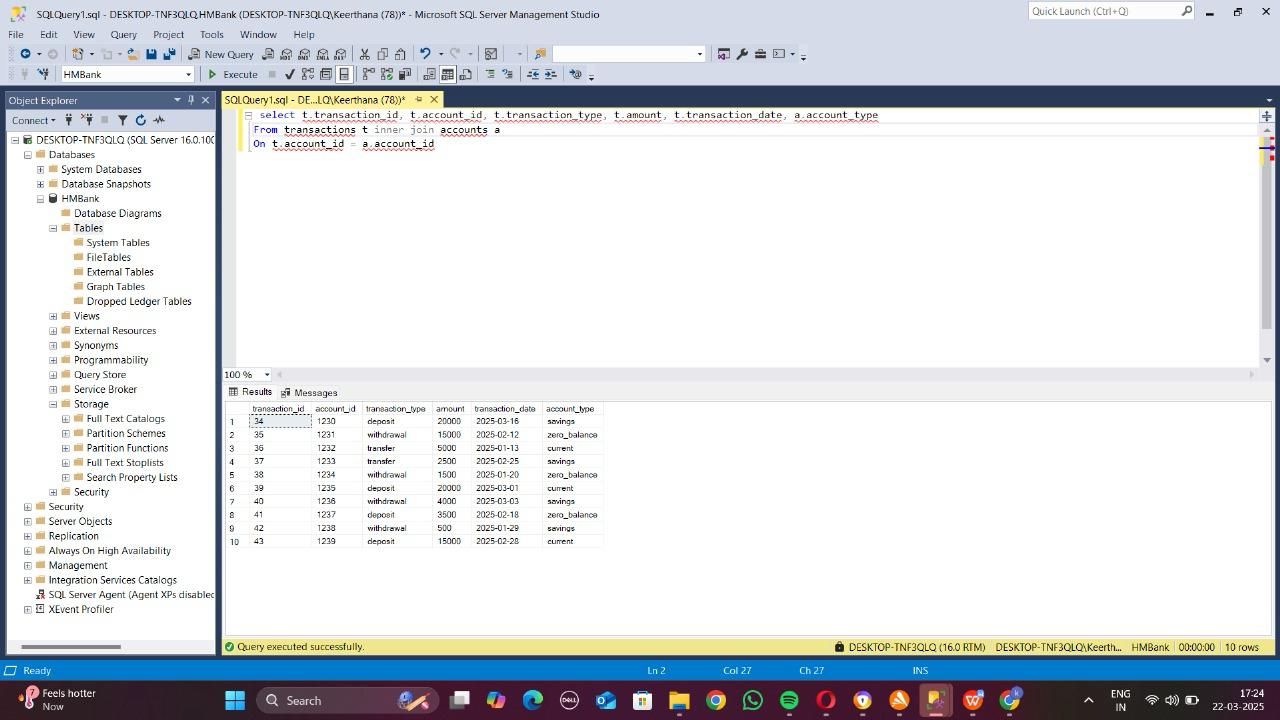
Order by DOB asc



5) select t.transaction\_id, t.account\_id, t.trasaction\_type, t.amount, t.transaction\_date, a.account\_type

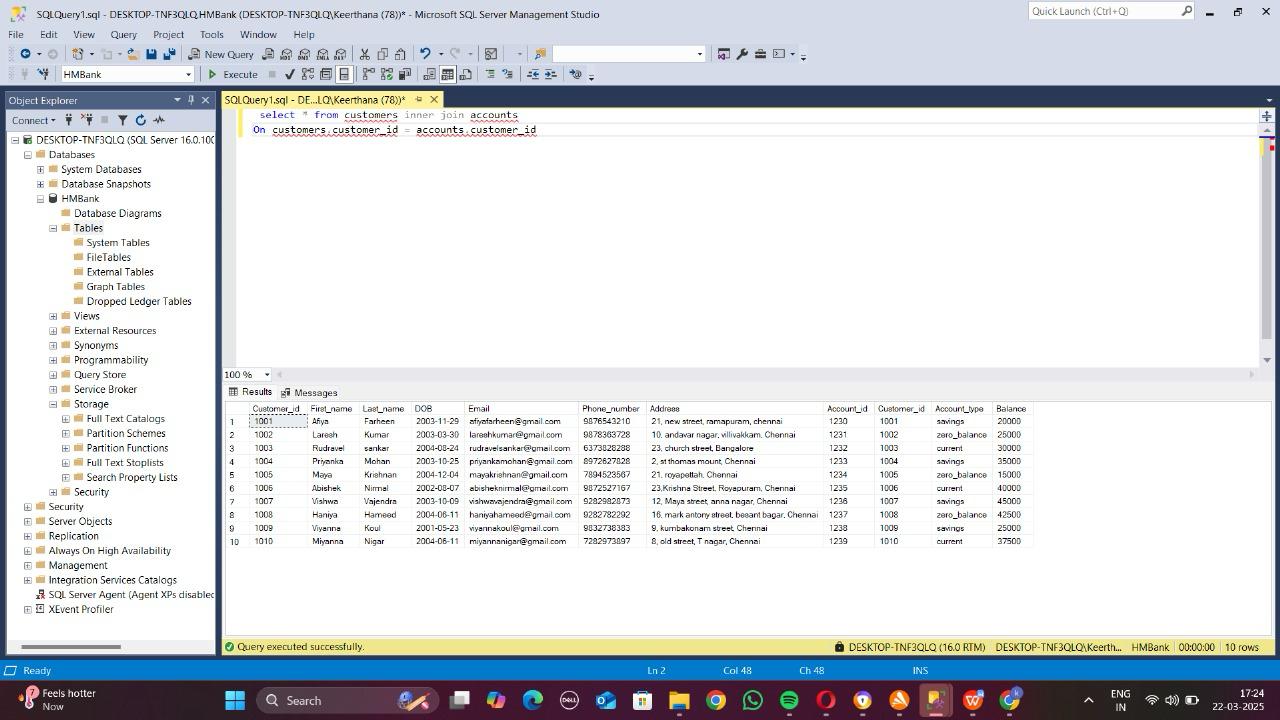
From transactions t inner join accounts a

On t.transaction\_id = a.account\_id



6) select \* from customers inner join accounts

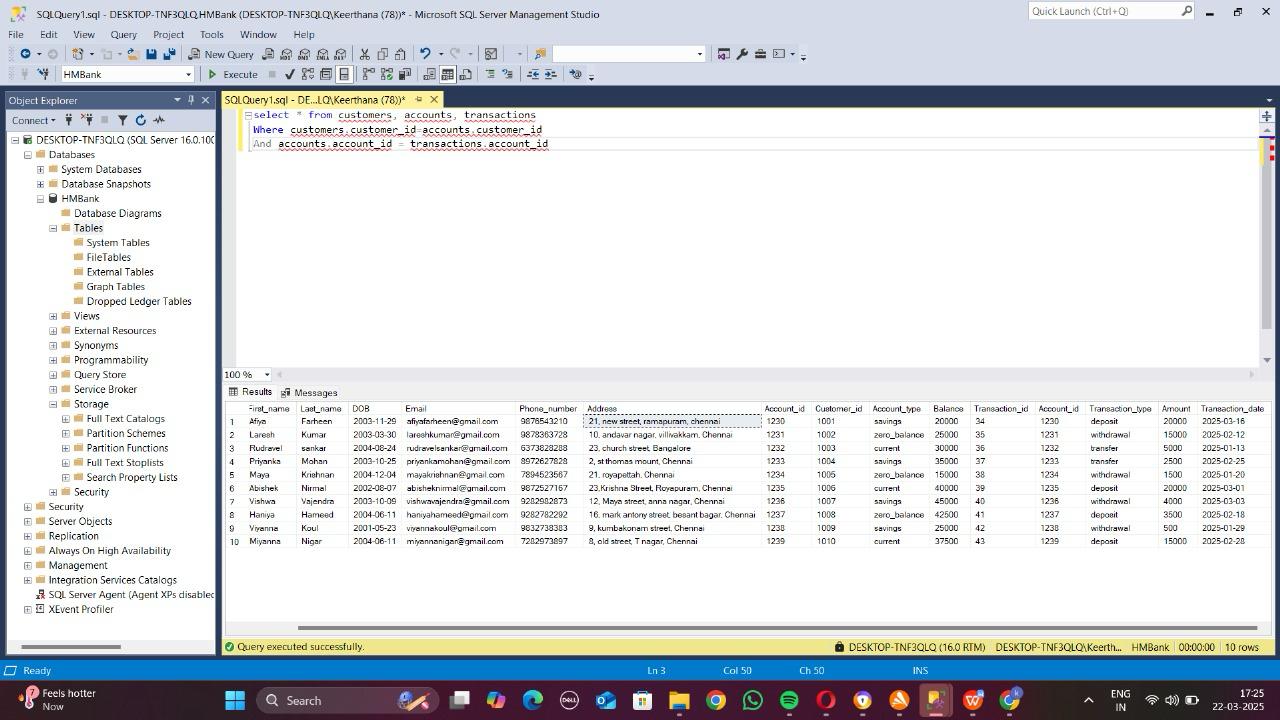
On customers.customer\_id = accounts.customer\_id



7) select \* from customers, accounts, transactions

Where customers.customer\_id=accounts.customer\_id

And accounts.account\_id = transactions.account\_id



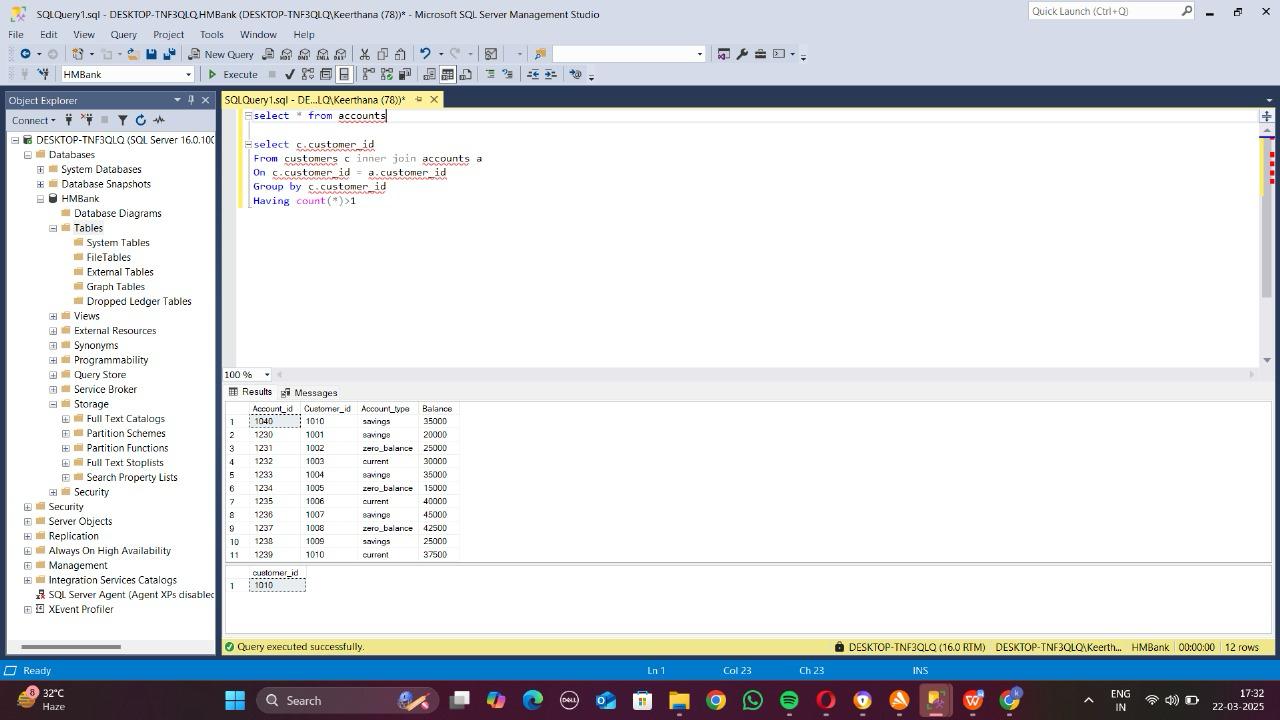
8) select c.customer\_id

From customers c inner join accounts a

On c.customer\_id = a.customer\_id

Group by c.customer\_id

Having count(\*)>1



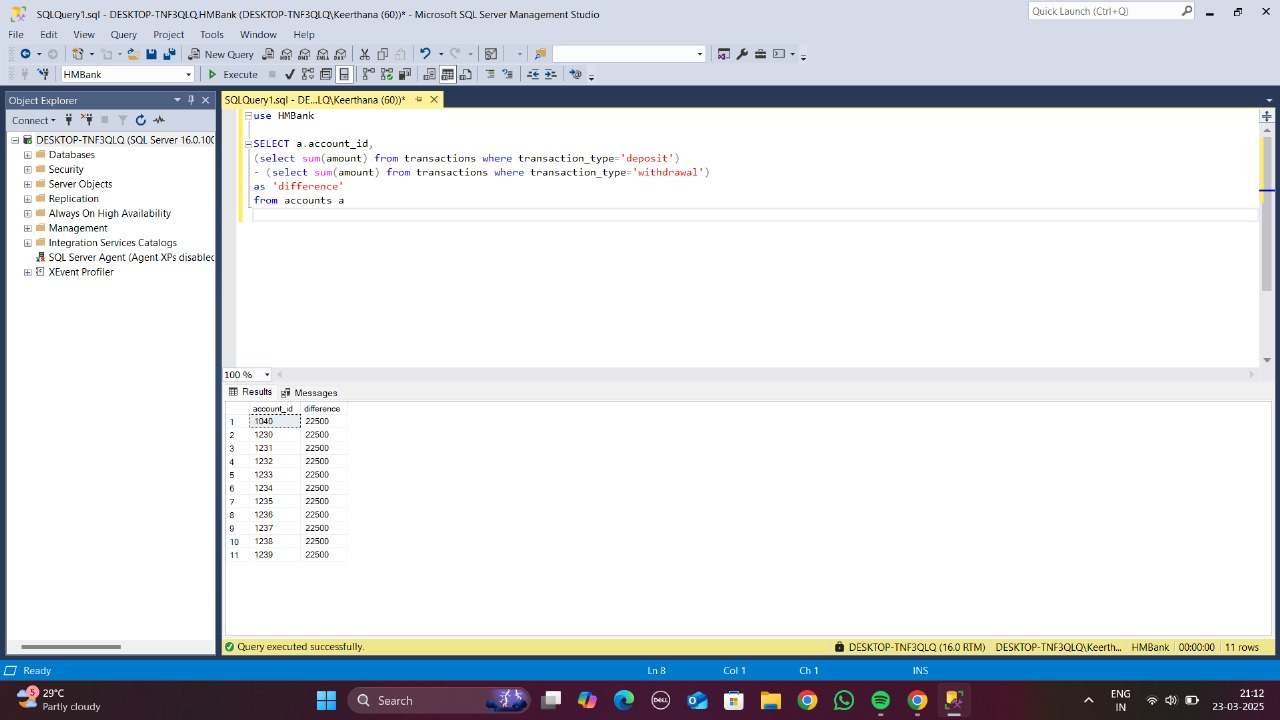
9) select a.account\_id,

(select sum(amount) from transactions where transaction\_type=’deposit’)

- (select sum(amount) from transactions where transaction\_type=’withdrawal’)

As ‘difference’

From accounts a



10) select account\_id, avg(balance)

From accounts

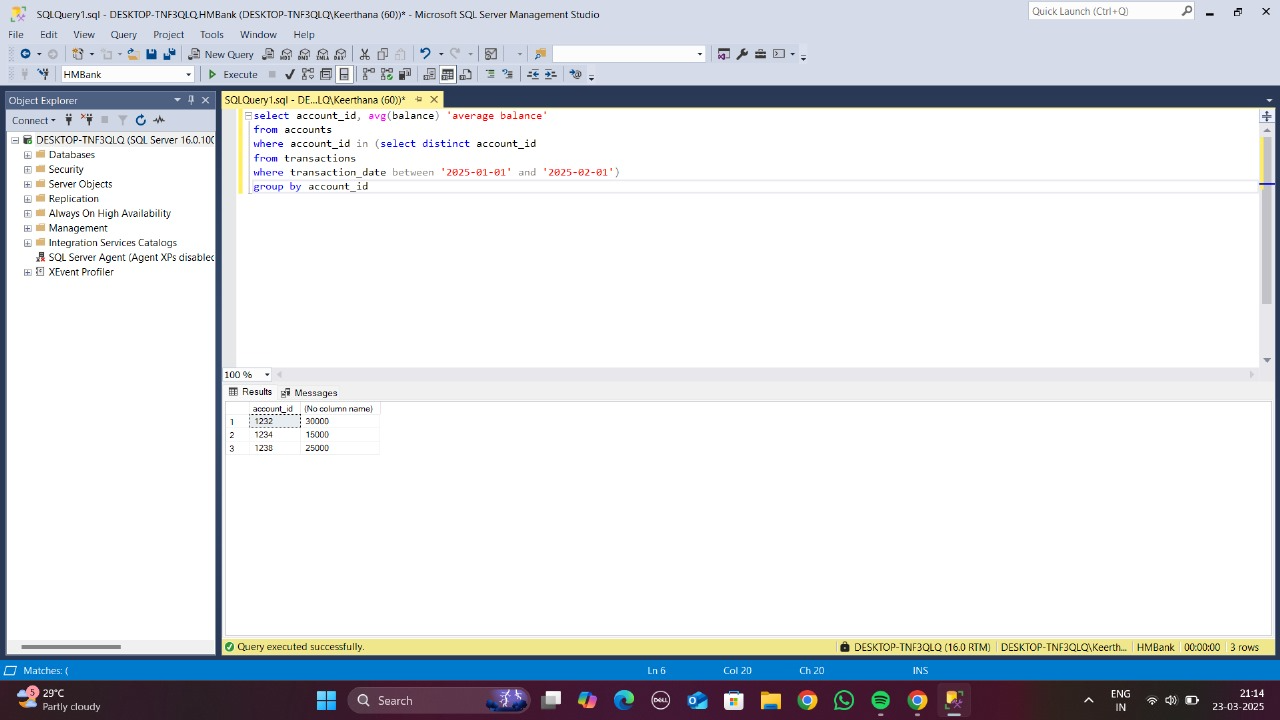
Where account\_id in

(select distinct account\_id

From transactions

Where transactions between ‘2025-01-01’ and ‘2025-02-01’)

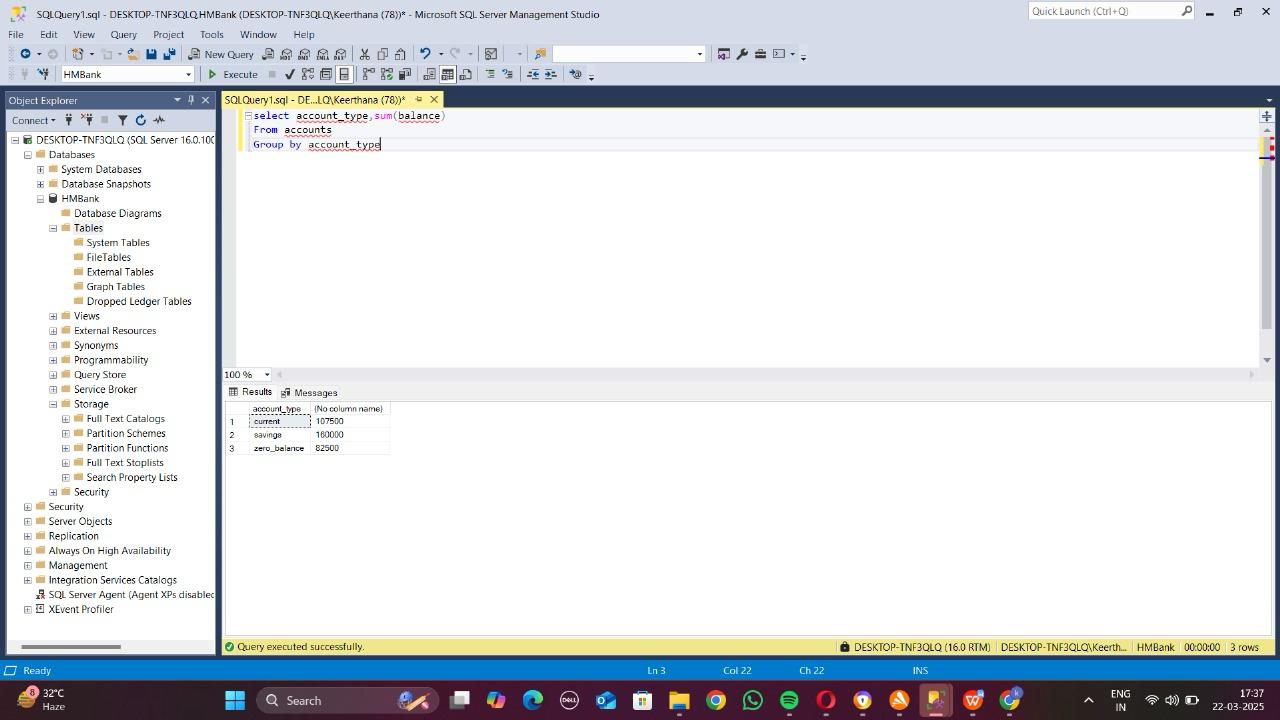
Group by account\_id



11) select account\_type, sum(balance)

From accounts

Group by account\_type

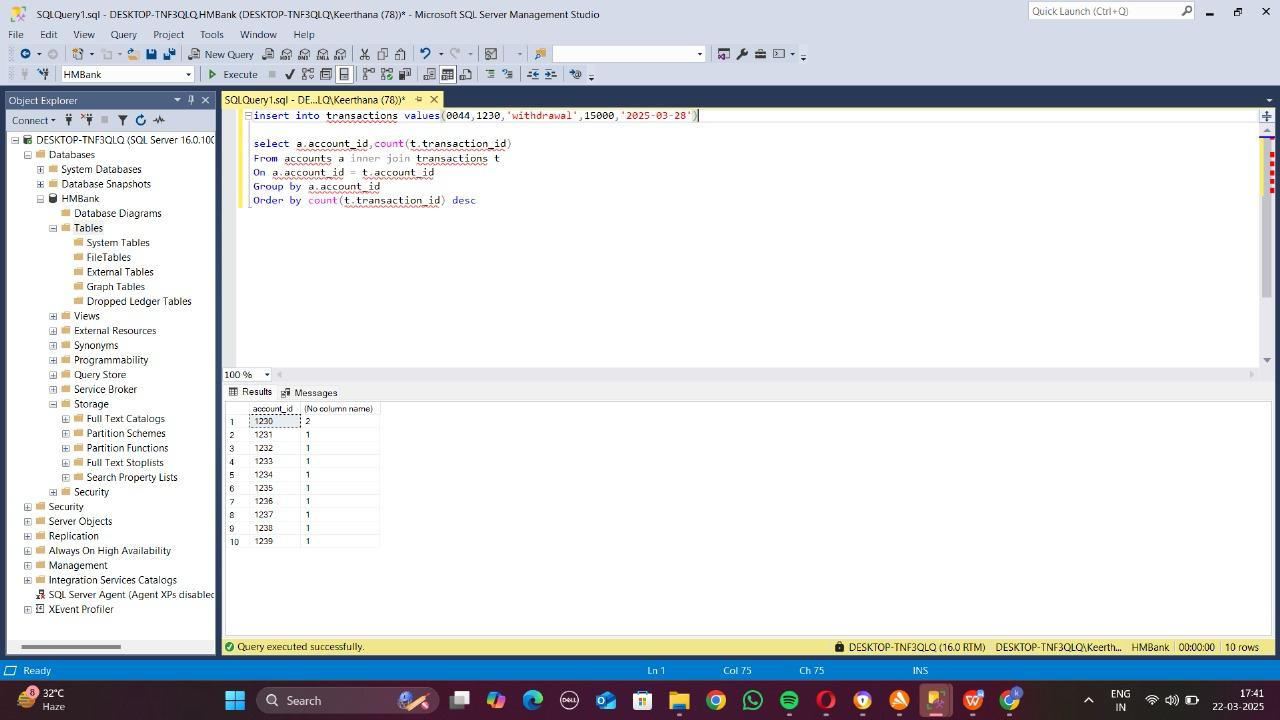


12) select a.account\_id

From accounts a inner join transactions t

On a.account\_id = t.account\_id

Group by a.account\_id

Order by count(t.transaction\_id) desc 

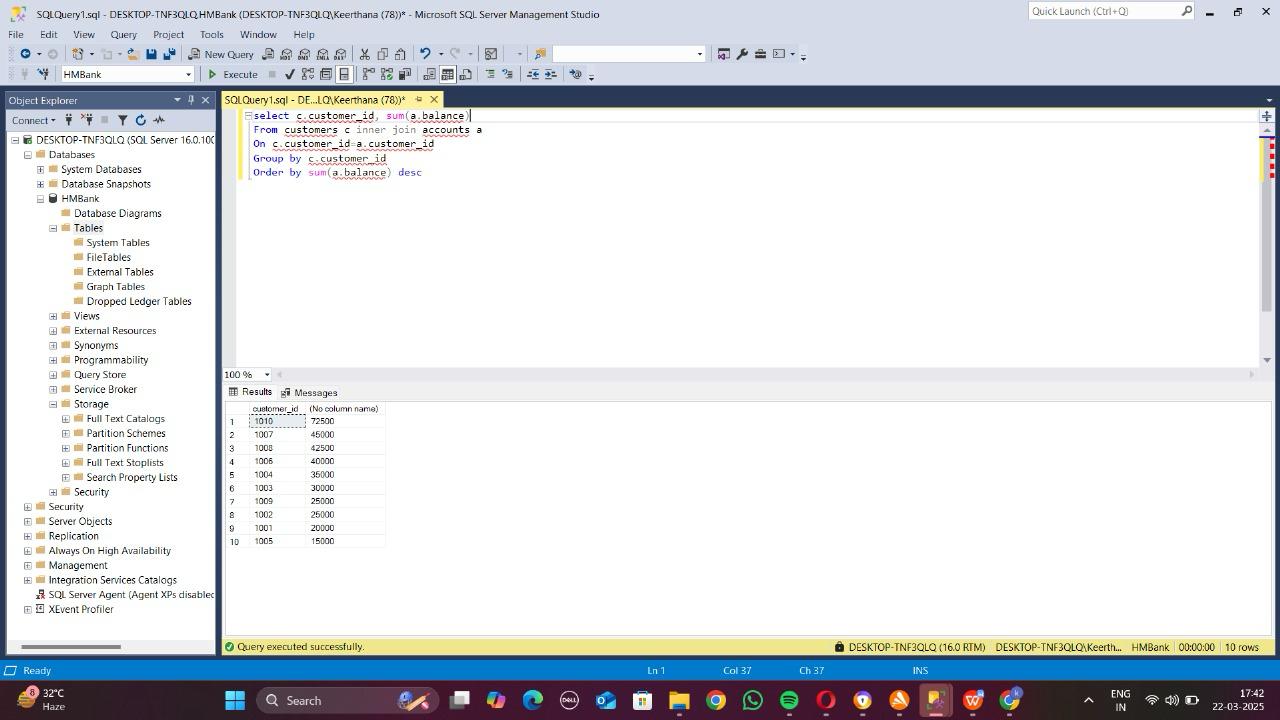
13) select c.customer\_id, sum(a.balance)

From customers c inner join accounts a

On c.customer\_id=a.customer\_id

Group by c.customer\_id

Order by sum(a.balance) desc



14) select \* from transactions

Where (account\_id, amount, transaction\_date) in

(select account\_id, amount, transaction\_date

From transactions

Group by account\_id, amount, transaction\_date

Having count(\*) > 1)

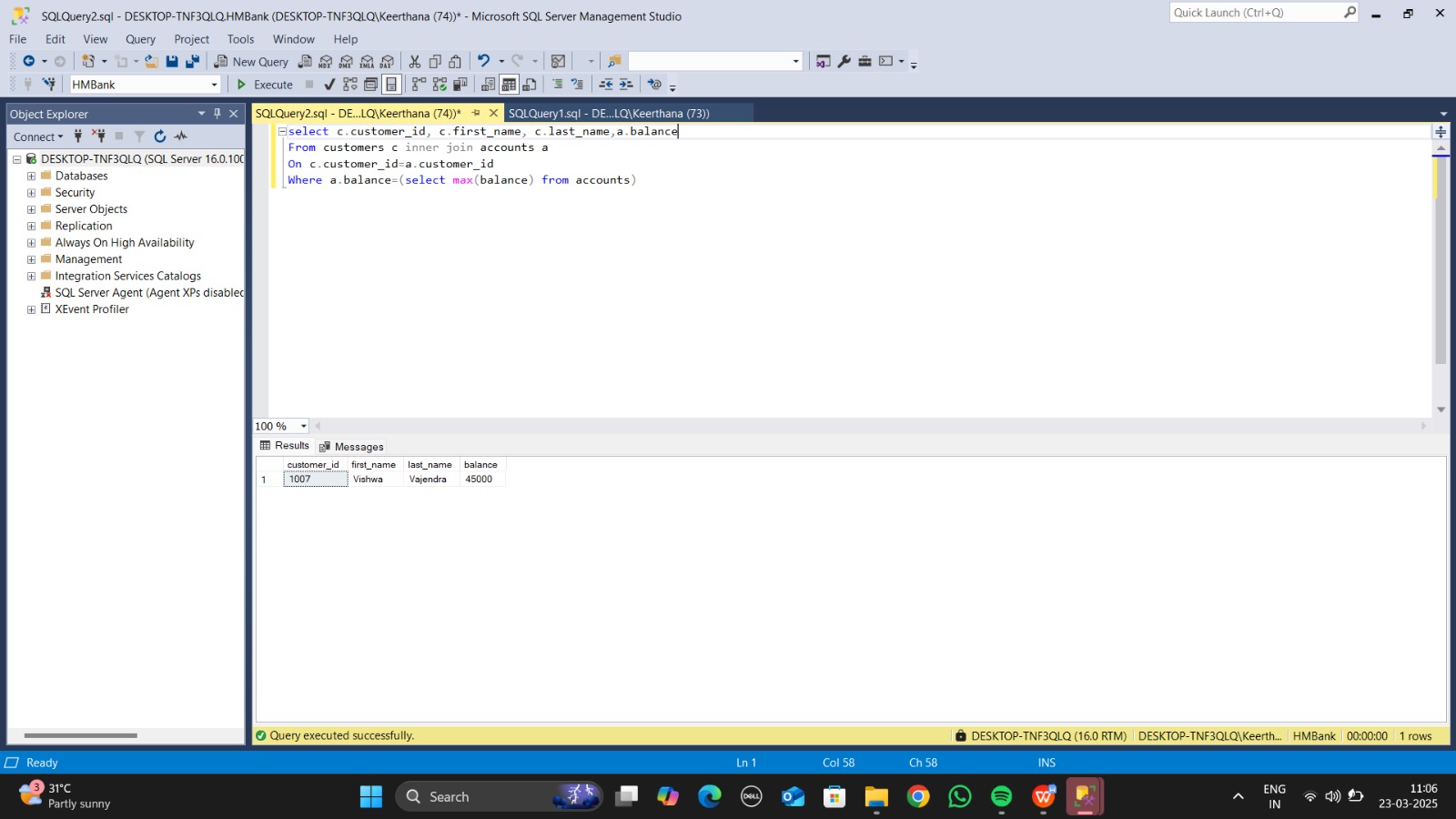
**Task 4:**

1)select c.customer\_id, c.first\_name, c.last\_name, a.balance

From customers c inner join accounts a

On c.customer\_id=a.customer\_id

Where a.balance=(select max(balance) from accounts)

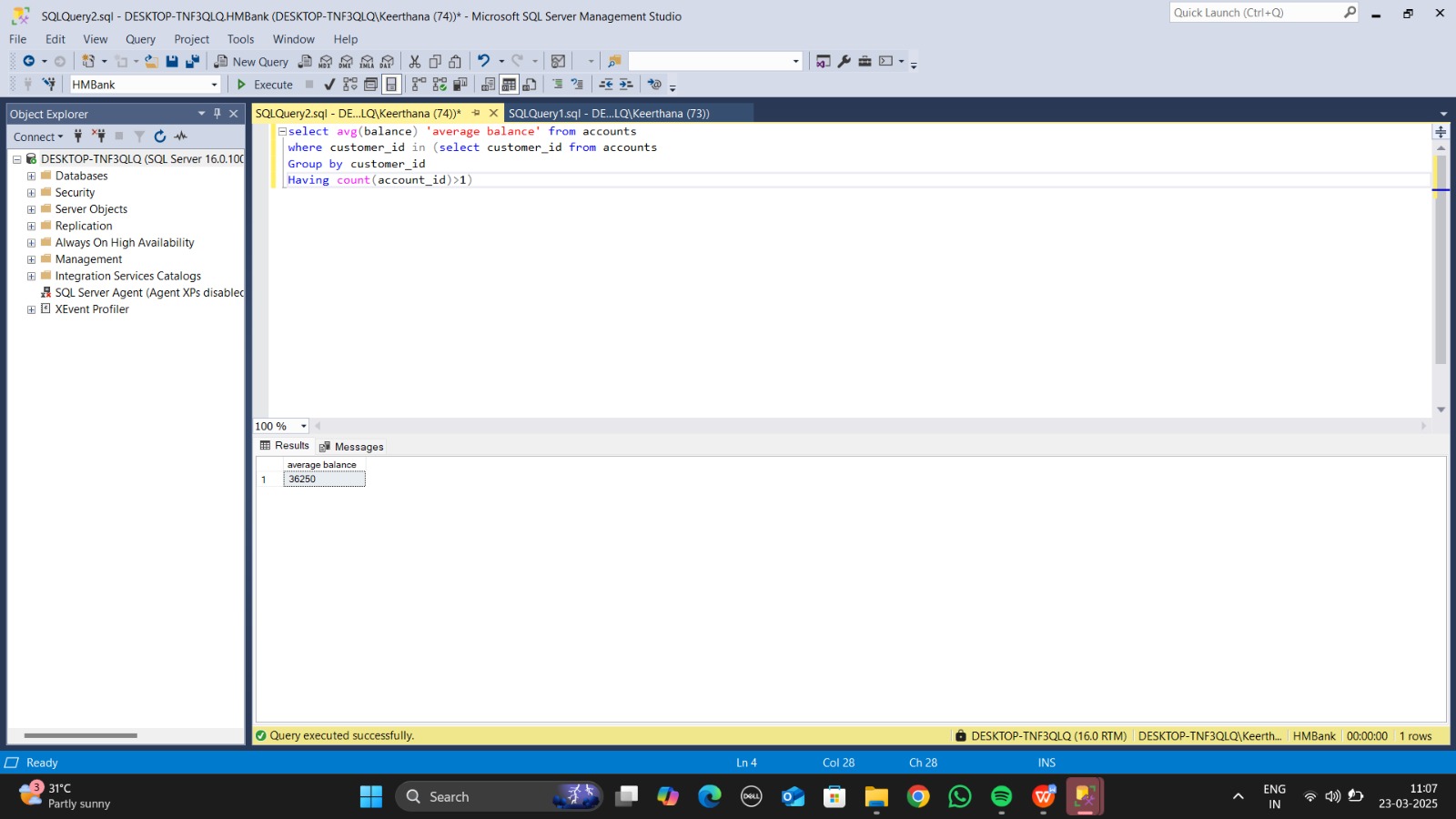


2) select avg(balance) ‘average balance’ from accounts

Group by (select customer\_id from accounts

Group by customer\_id

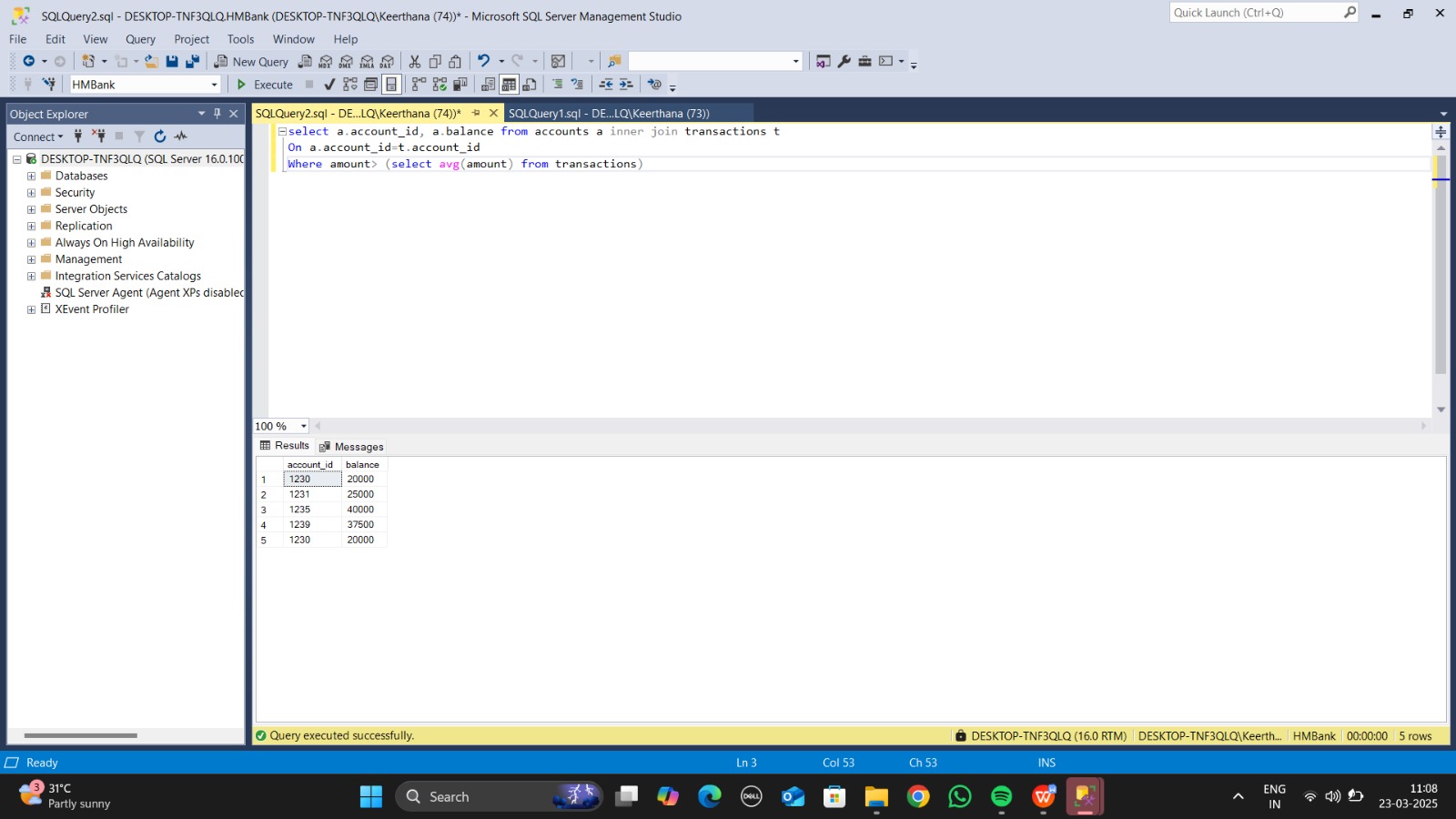
Having count(account\_id)>1)



3)select a.account\_id, a.balance from accounts a inner join transactions t

On a.account\_id=t.account\_id

Where amount> (select avg(amount) from transactions)



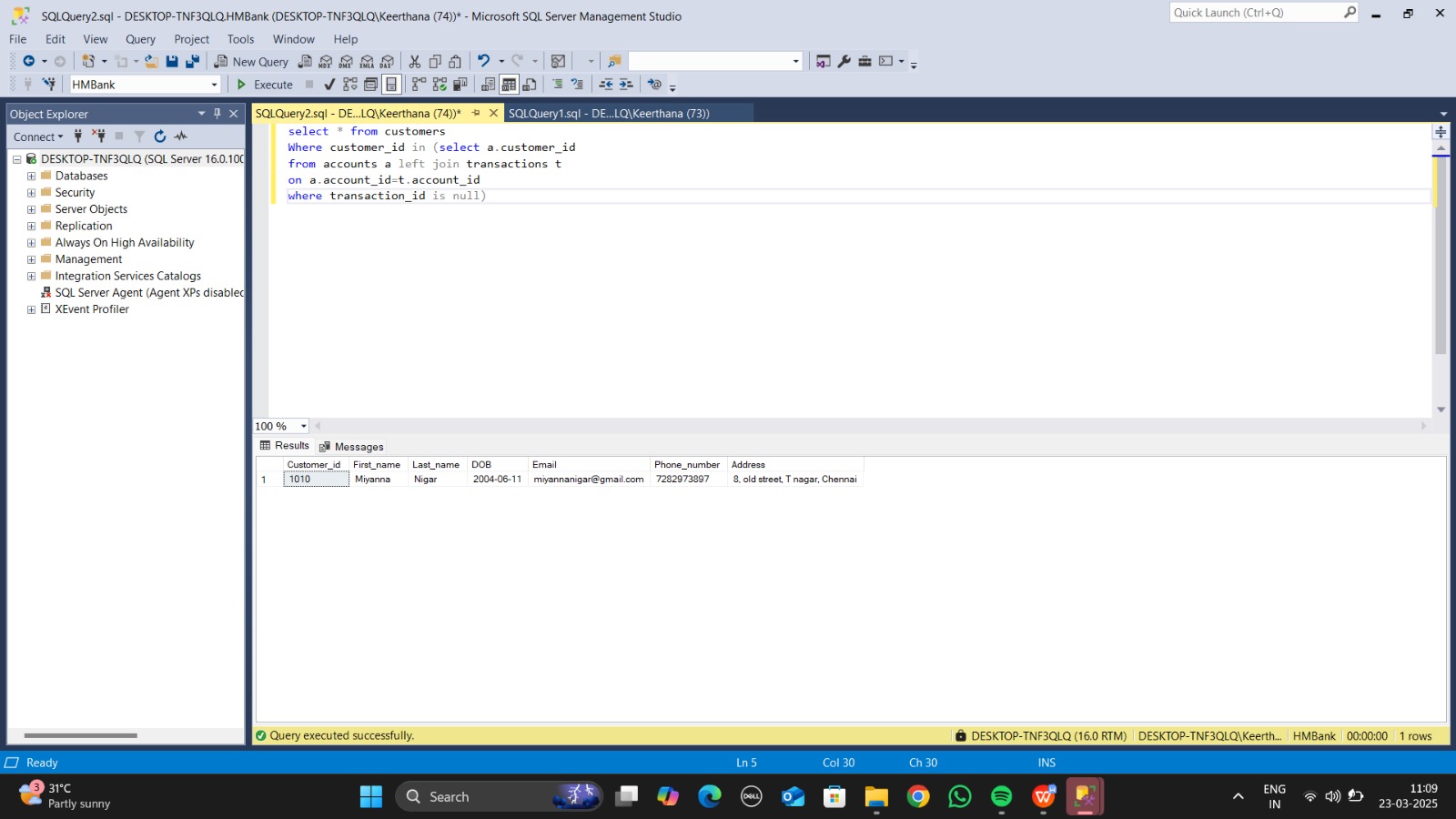
4)select \* from customers

Where customer\_id in (select a.customer\_id

from accounts a left join transactions t

on a.account\_id=t.account\_id

where transaction\_id is null)



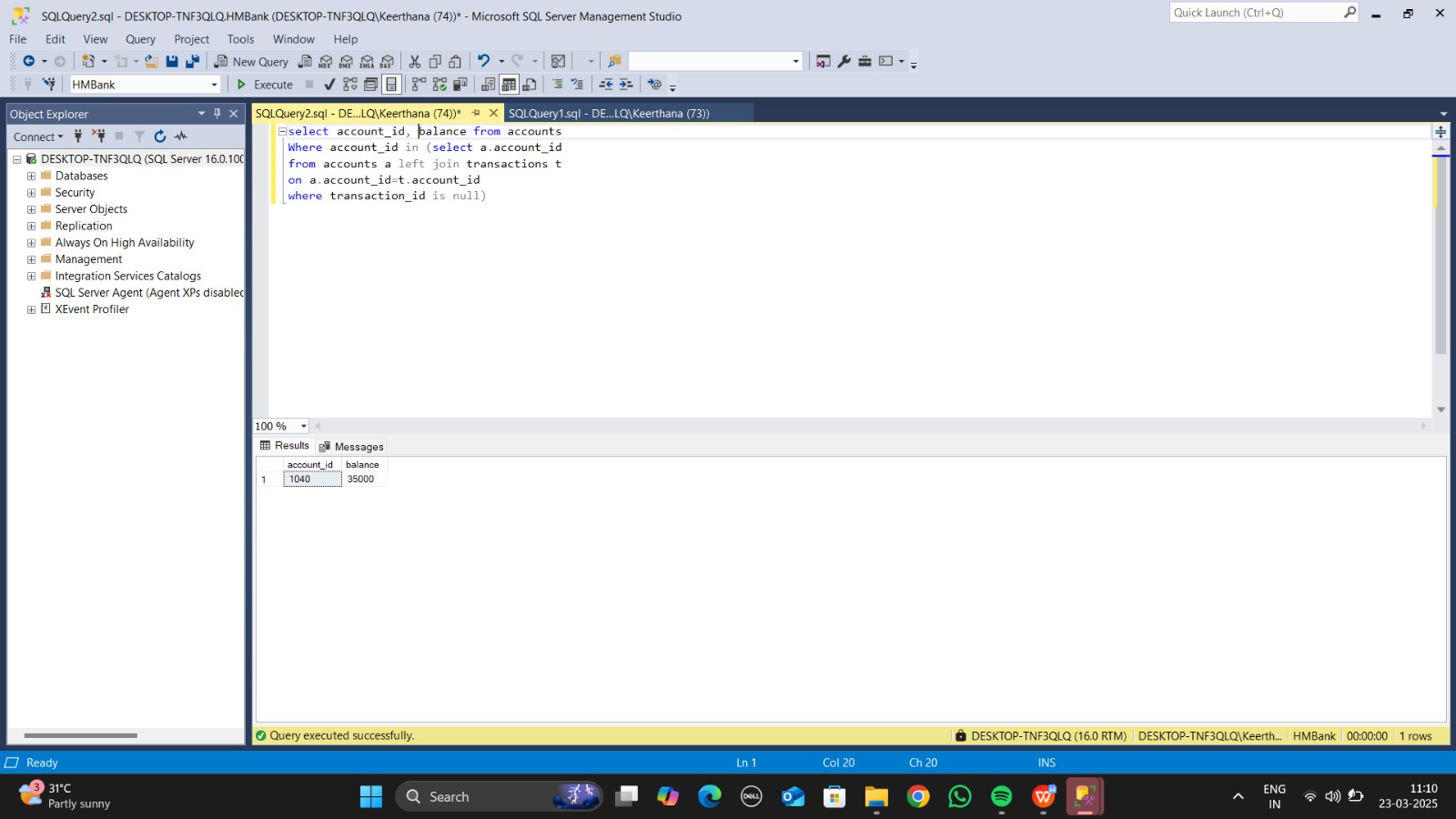
5)select account\_id, balance from accounts

Where account\_id in (select a.account\_id

from accounts a left join transactions t

on a.account\_id=t.account\_id

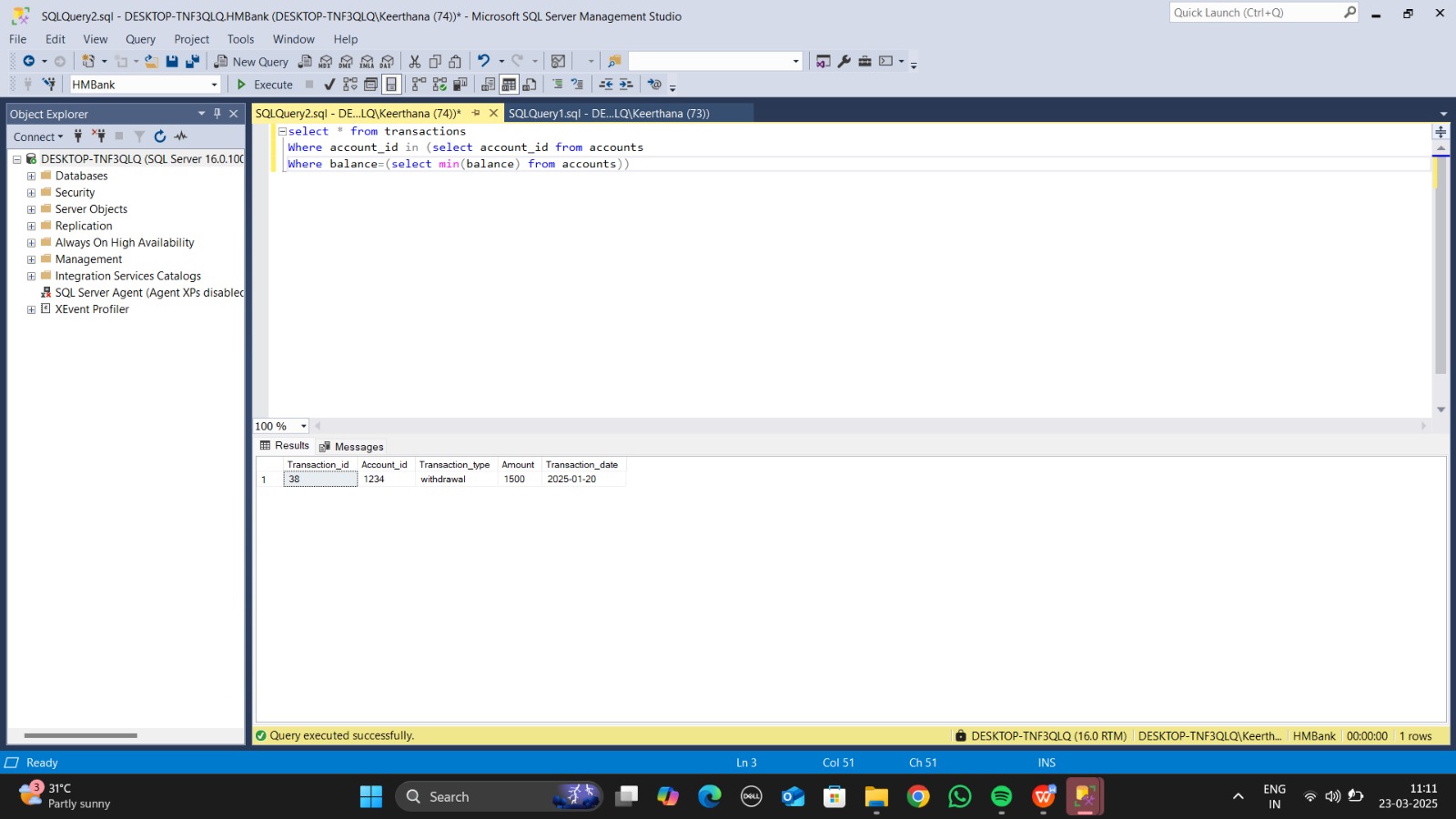
where transaction\_id is null)



6)select \* from transactions

Where account\_id in (select account\_id from accounts

Where balance=(select min(balance) from accounts))



7) select \* from customers

Where customer\_id in (select customer\_id

From accounts

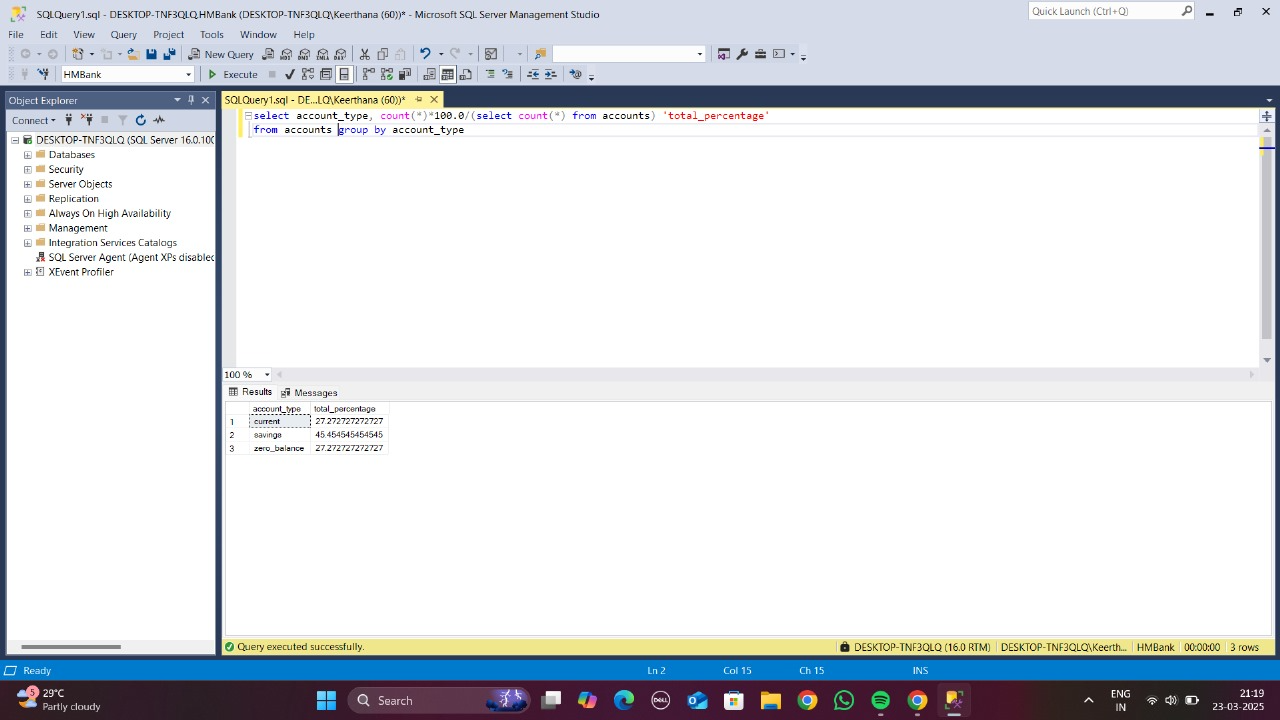
Group by customer\_id

having count(DISTINCT account\_type)>1)



8) Select account\_type, COUNT(\*) \* 100.0 / (SELECT COUNT(\*) from Accounts) ‘total\_percentage’

from Accounts group by account\_type;



9)select \* from transactions

Where account\_id in (select account\_id from accounts

Where customer\_id=1002)



10)select a.account\_type, (select sum(balance)

From accounts where account\_type=a.account\_type) as ‘total balance’

From accounts a

Group by a.account\_type

