MINI PROJECT

NET BANKING

In net banking have four tables.

1.Profile
2.Account
3.Transactions
4.CheckBookRequest

Profile table include:

CUSTOMER_ID
CUSTOMER_NAME
DOB
EMAIL_ID
CONTACT_NUMBER

Account table include:

CUSTOMER_ID
CUSTOMER_NAME
ACCOUNT_NUMBER
BANK_NAME
ACCOUNT_TYPE
BALANCE
BRANCH

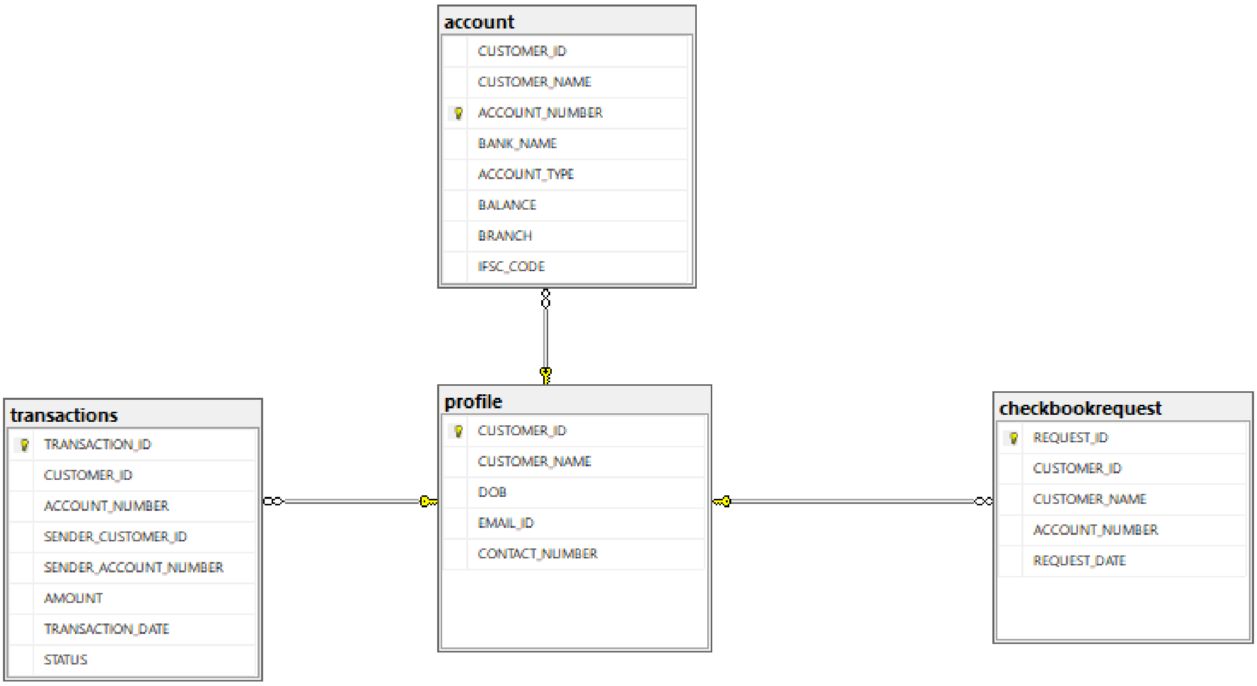
Transactions table include:

TRANSACTION_ID
CUSTOMER_ID
ACCOUNT_NUMBER
SENDER_CUSTOMER_ID
SENDER_ACCOUNT_NUMBER
AMOUNT
TRANSACTION_DATE
STATUS

CheckBookRequest table include:

REQUEST_ID
CUSTOMER_ID
CUSTOMER_NAME
ACCOUNT_NUMBER

DATABASE DIAGRAM:



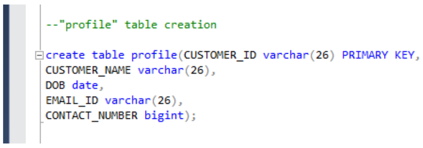
The project aims to establish a highly secure and efficient Internet banking system accessible to all customers. Its primary goal is to empower customers to conduct crucial transactions from the convenience of their current location without the need to physically visit a bank.

The initiative is designed to seamlessly integrate with the existing banking system, streamlining customer-bank interactions. By leveraging real-time technology, the project offers a robust internet-based platform, simplifying and expediting banking operations.

The various functionality involved in the project are:

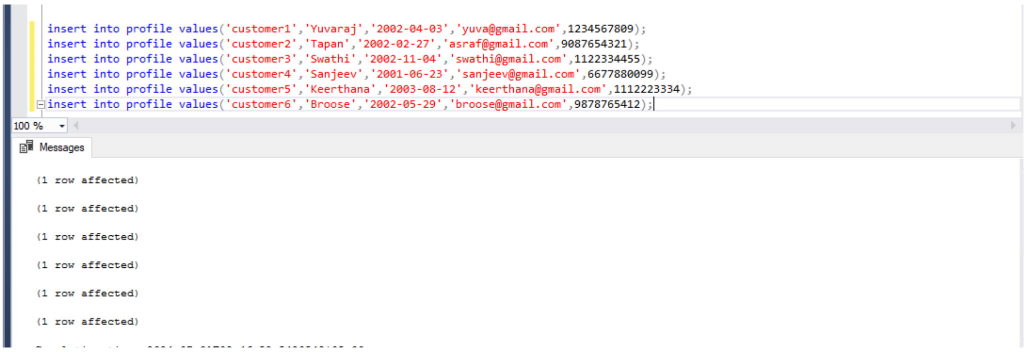
· Account Summary
· Funds Transfer to another account
· Request for cheque book
· Various Transaction Reports.
· List Different Account Details
· Profile manipulation

"**profile**" table creation



```
--"profile" table creation

create table profile(CUSTOMER_ID varchar(26) PRIMARY KEY,
CUSTOMER_NAME varchar(26),
DOB date,
EMAIL_ID varchar(26),
CONTACT_NUMBER bigint);
```

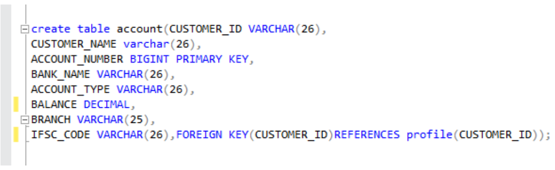
Values inserted in profile table:



```
insert into profile values('customer1','Yuvaraj','2002-04-03','yuva@gmail.com',1234567809);
insert into profile values('customer2','Tapan','2002-02-27','asraf@gmail.com',9087654321);
insert into profile values('customer3','Swathi','2002-11-04','swathi@gmail.com',1122334455);
insert into profile values('customer4','Sanjeev','2001-06-23','sanjeev@gmail.com',6677880099);
insert into profile values('customer5','Keerthana','2003-08-12','keerthana@gmail.com',1112223334);
insert into profile values('customer6','Broose','2002-05-29','broose@gmail.com',9878765412);
```

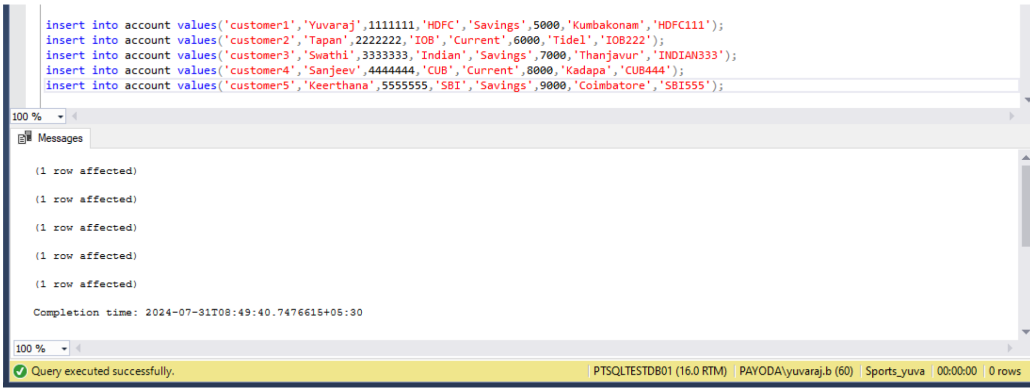
```
(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)
```

"**account**" table creation



```
create table account(CUSTOMER_ID VARCHAR(26),
CUSTOMER_NAME varchar(26),
ACCOUNT_NUMBER BIGINT PRIMARY KEY,
BANK_NAME VARCHAR(26),
ACCOUNT_TYPE VARCHAR(26),
BALANCE DECIMAL,
BRANCH VARCHAR(25),
IFSC_CODE VARCHAR(26),FOREIGN KEY(CUSTOMER_ID)REFERENCES profile(CUSTOMER_ID));
```

Values inserted in account table:

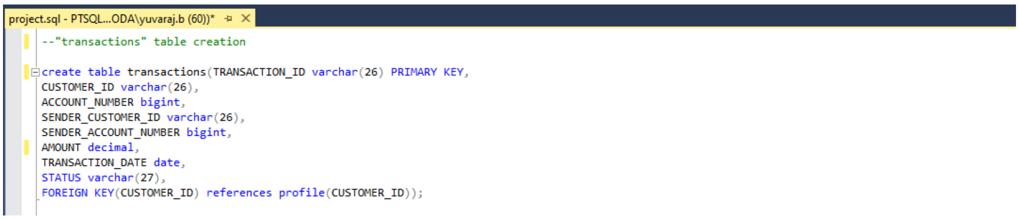


```
insert into account values('customer1','Yuvaraj',1111111,'HDFC','Savings',5000,'Kumbakonam','HDFC111');
insert into account values('customer2','Tapan',2222222,'IOB','Current',6000,'Tidel','IOB222');
insert into account values('customer3','Swathi',3333333,'Indian','Savings',7000,'Thanjavur','INDIAN333');
insert into account values('customer4','Sanjeev',4444444,'CUB','Current',8000,'Kadapa','CUB444');
insert into account values('customer5','Keerthana',5555555,'SBI','Savings',9000,'Coimbatore','SBI555');
```

```
(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2024-07-31T08:49:40.7476615+05:30
```

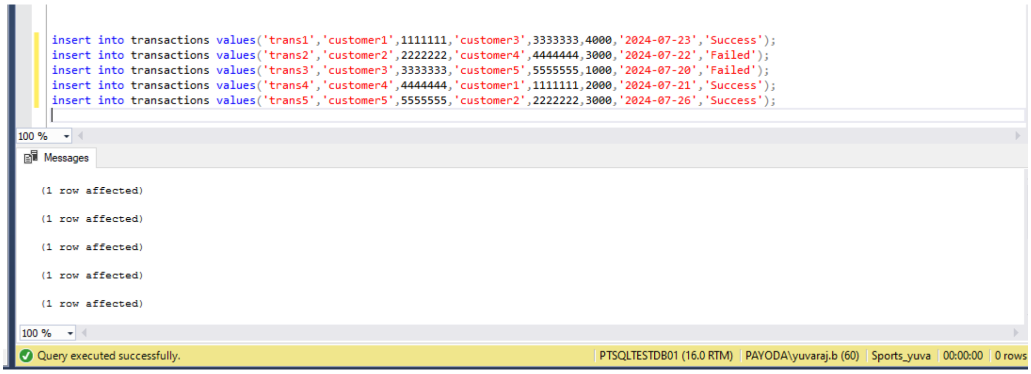
```
Query executed successfully.    PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 0 rows
```

"**transactions**" table creation



```sql
--"transactions" table creation

create table transactions(TRANSACTION_ID varchar(26) PRIMARY KEY,
CUSTOMER_ID varchar(26),
ACCOUNT_NUMBER bigint,
SENDER_CUSTOMER_ID varchar(26),
SENDER_ACCOUNT_NUMBER bigint,
AMOUNT decimal,
TRANSACTION_DATE date,
STATUS varchar(27),
FOREIGN KEY(CUSTOMER_ID) references profile(CUSTOMER_ID));
```

Values inserted in transactions table:

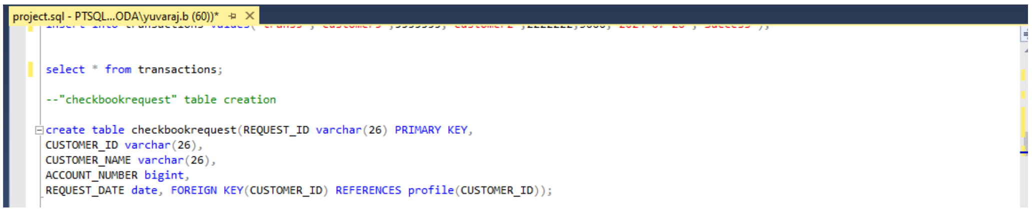


```sql
insert into transactions values('trans1','customer1',1111111,'customer3',3333333,4000,'2024-07-23','Success');
insert into transactions values('trans2','customer2',2222222,'customer4',4444444,3000,'2024-07-22','Failed');
insert into transactions values('trans3','customer3',3333333,'customer5',5555555,1000,'2024-07-20','Failed');
insert into transactions values('trans4','customer4',4444444,'customer1',1111111,2000,'2024-07-21','Success');
insert into transactions values('trans5','customer5',5555555,'customer2',2222222,3000,'2024-07-26','Success');
```

```
(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)
```

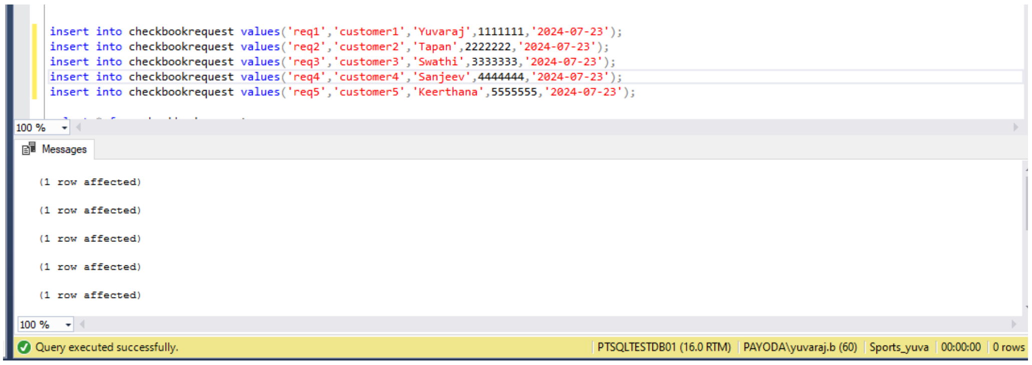
```
Query executed successfully.   PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 0 rows
```

"**chechBookRequest**" table creation



```sql
select * from transactions;

--"checkbookrequest" table creation

create table checkbookrequest(REQUEST_ID varchar(26) PRIMARY KEY,
CUSTOMER_ID varchar(26),
CUSTOMER_NAME varchar(26),
ACCOUNT_NUMBER bigint,
REQUEST_DATE date, FOREIGN KEY(CUSTOMER_ID) REFERENCES profile(CUSTOMER_ID));
```

Values inserted in checkBookRequest table:



```sql
insert into checkbookrequest values('req1','customer1','Yuvaraj',1111111,'2024-07-23');
insert into checkbookrequest values('req2','customer2','Tapan',2222222,'2024-07-23');
insert into checkbookrequest values('req3','customer3','Swathi',3333333,'2024-07-23');
insert into checkbookrequest values('req4','customer4','Sanjeev',4444444,'2024-07-23');
insert into checkbookrequest values('req5','customer5','Keerthana',5555555,'2024-07-23');
```

```
(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)
```

```
Query executed successfully.   PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 0 rows
```

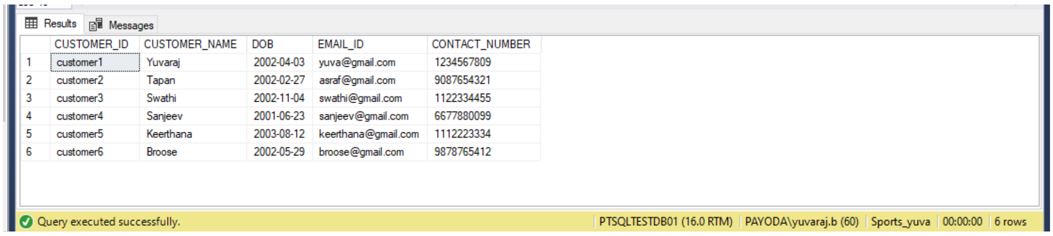
1.Retrieve All Records from a Table

1.Retrieve profile table

Query:

```
select * from profile;
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	DOB	EMAIL_ID	CONTACT_NUMBER
1	customer1	Yuvaraj	2002-04-03	yuva@gmail.com	1234567809
2	customer2	Tapan	2002-02-27	asraf@gmail.com	9087654321
3	customer3	Swathi	2002-11-04	swathi@gmail.com	1122334455
4	customer4	Sanjeev	2001-06-23	sanjeev@gmail.com	6677880099
5	customer5	Keerthana	2003-08-12	keerthana@gmail.com	1112223334
6	customer6	Broose	2002-05-29	broose@gmail.com	9878765412

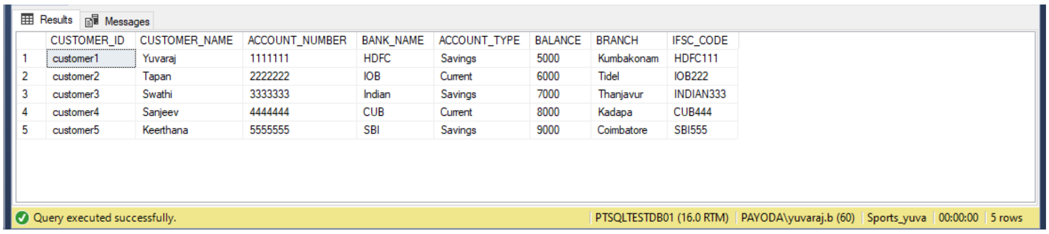
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 6 rows

2.Retrieve account table

Query:

```
select * from account;
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER	BANK_NAME	ACCOUNT_TYPE	BALANCE	BRANCH	IFSC_CODE
1	customer1	Yuvaraj	1111111	HDFC	Savings	5000	Kumbakonam	HDFC111
2	customer2	Tapan	2222222	IOB	Current	6000	Tidel	IOB222
3	customer3	Swathi	3333333	Indian	Savings	7000	Thanjavur	INDIAN333
4	customer4	Sanjeev	4444444	CUB	Current	8000	Kadapa	CUB444
5	customer5	Keerthana	5555555	SBI	Savings	9000	Coimbatore	SBI555

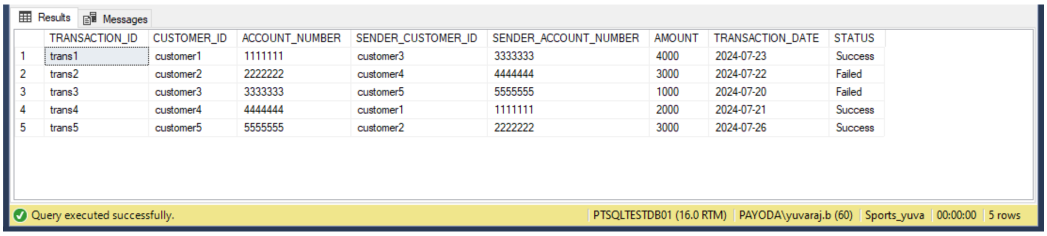
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 5 rows

3.Retrieve transactions table

Query:

```
select * from transactions;
```

Output:



	TRANSACTION_ID	CUSTOMER_ID	ACCOUNT_NUMBER	SENDER_CUSTOMER_ID	SENDER_ACCOUNT_NUMBER	AMOUNT	TRANSACTION_DATE	STATUS
1	trans1	customer1	1111111	customer3	3333333	4000	2024-07-23	Success
2	trans2	customer2	2222222	customer4	4444444	3000	2024-07-22	Failed
3	trans3	customer3	3333333	customer5	5555555	1000	2024-07-20	Failed
4	trans4	customer4	4444444	customer1	1111111	2000	2024-07-21	Success
5	trans5	customer5	5555555	customer2	2222222	3000	2024-07-26	Success

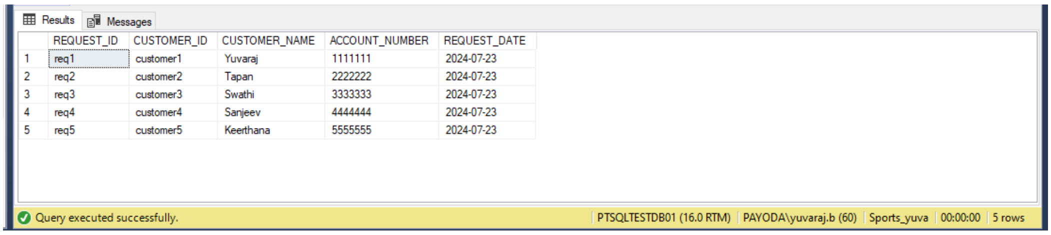
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 5 rows

4.Retrieve checkBookRequest table

Query:

```
select * from checkBookRequest;
```

Output:



	REQUEST_ID	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER	REQUEST_DATE
1	req1	customer1	Yuvaraj	1111111	2024-07-23
2	req2	customer2	Tapan	2222222	2024-07-23
3	req3	customer3	Swathi	3333333	2024-07-23
4	req4	customer4	Sanjeev	4444444	2024-07-23
5	req5	customer5	Keerthana	5555555	2024-07-23

Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 5 rows

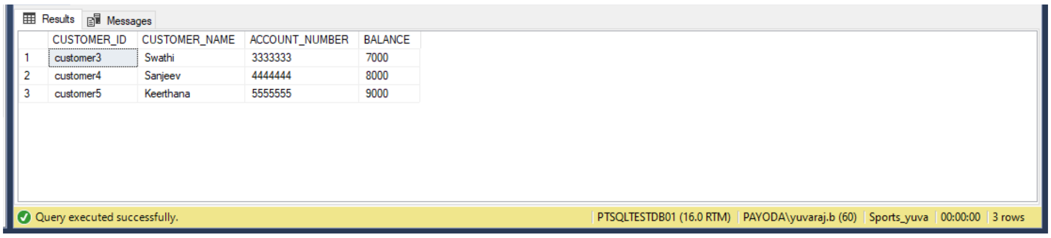
2.Filter Records Based on a Condition

1.Retrieve the customerid,customername,accountno,balance from account table and balance is above 6000?

Query:

> select CUSTOMER_ID,CUSTOMER_NAME,ACCOUNT_NUMBER,BALANCE from account where BALANCE>6000;

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER	BALANCE
1	customer3	Swathi	3333333	7000
2	customer4	Sanjeev	4444444	8000
3	customer5	Keerthana	5555555	9000

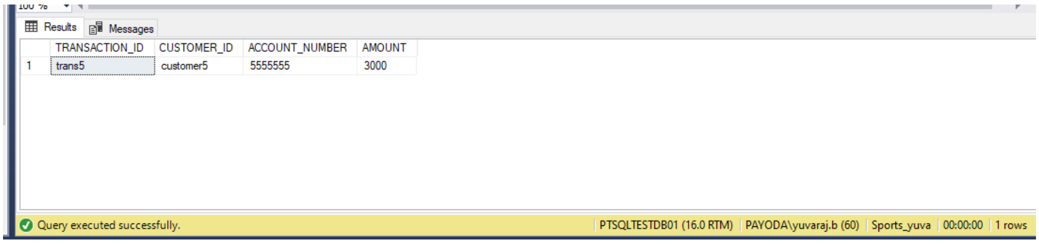
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 3 rows

2.Retrieve the transactionid,customerid,accountno,amount from transaction table and transaction date is above 2024-07-23?

Query:

> select TRANSACTION_ID,CUSTOMER_ID,ACCOUNT_NUMBER,AMOUNT from transactions where TRANSACTION_DATE>'2024-07-23';

Output:



	TRANSACTION_ID	CUSTOMER_ID	ACCOUNT_NUMBER	AMOUNT
1	trans5	customer5	5555555	3000

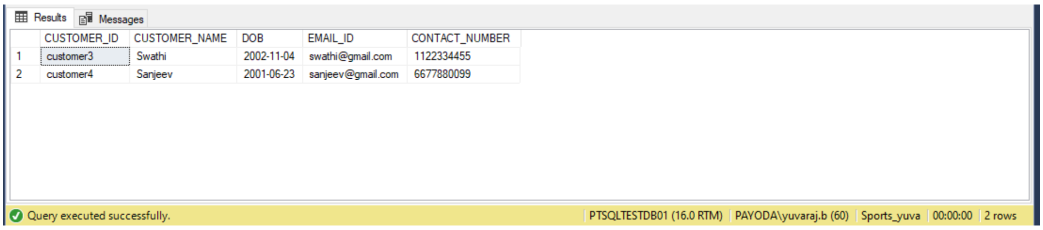
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 1 rows

3.Retrieve the customer details the customer name starts with 'S'

Query:

```
> select * from profile where CUSTOMER_NAME like 'S%';
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	DOB	EMAIL_ID	CONTACT_NUMBER
1	customer3	Swathi	2002-11-04	swathi@gmail.com	1122334455
2	customer4	Sanjeev	2001-06-23	sanjeev@gmail.com	6677880099

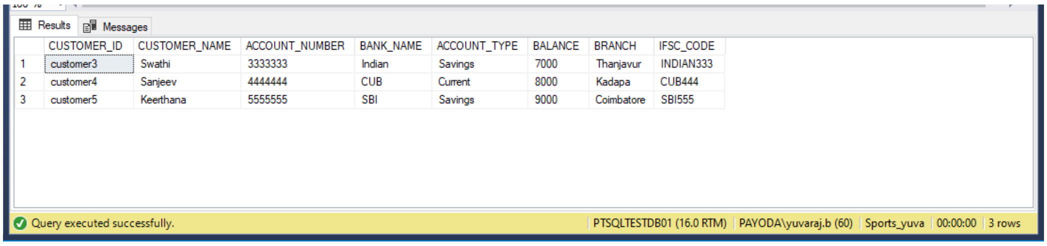
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 2 rows

4.Retrieve the details balance range is 7000 to 10000

Query:

```
>select * from account where BALANCE between 7000 and 10000;
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER	BANK_NAME	ACCOUNT_TYPE	BALANCE	BRANCH	IFSC_CODE
1	customer3	Swathi	3333333	Indian	Savings	7000	Thanjavur	INDIAN333
2	customer4	Sanjeev	4444444	CUB	Current	8000	Kadapa	CUB444
3	customer5	Keerthana	5555555	SBI	Savings	9000	Coimbatore	SBI555

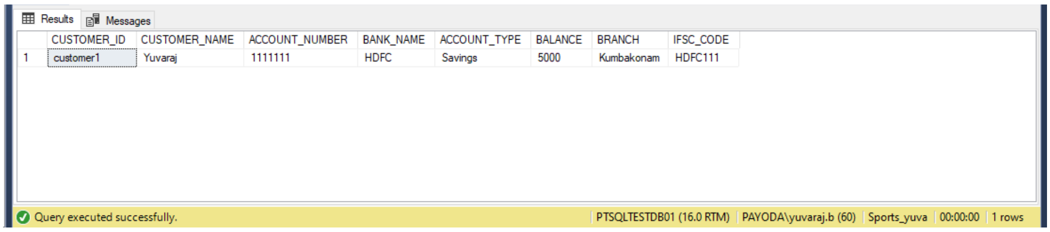
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 3 rows

5.AND,OR operator

Query:

```
>select * from account where (CUSTOMER_ID='customer1' and
CUSTOMER_NAME='Yuvaraj') or (ACCOUNT_NUMBER=1111111);
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER	BANK_NAME	ACCOUNT_TYPE	BALANCE	BRANCH	IFSC_CODE
1	customer1	Yuvaraj	1111111	HDFC	Savings	5000	Kumbakonam	HDFC111

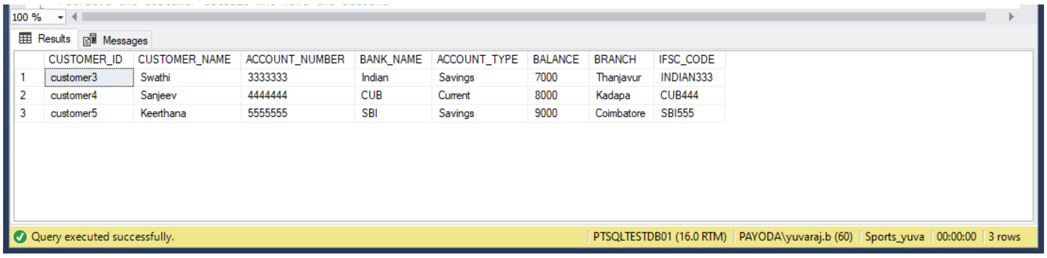
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 1 rows

6.NOT IN operator

Query:

>select * from account where BRANCH NOT IN('Kumbakonam','Tidel');

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER	BANK_NAME	ACCOUNT_TYPE	BALANCE	BRANCH	IFSC_CODE
1	customer3	Swathi	3333333	Indian	Savings	7000	Thanjavur	INDIAN333
2	customer4	Sanjeev	4444444	CUB	Current	8000	Kadapa	CUB444
3	customer5	Keerthana	5555555	SBI	Savings	9000	Coimbatore	SBI555

Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 3 rows

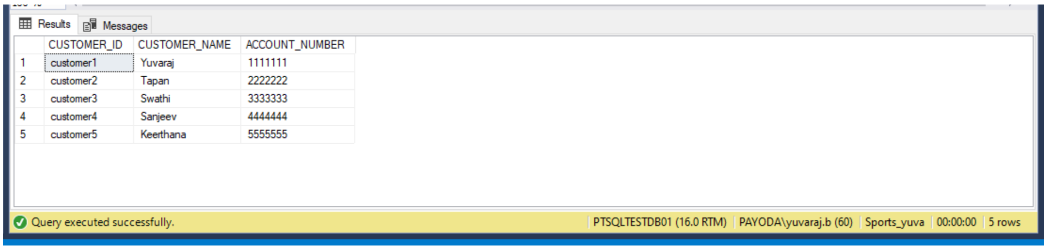
3.Join Two Tables

1.Retrieve the customer details who have the account

Query:

>select p.CUSTOMER_ID,p.CUSTOMER_NAME,a.ACCOUNT_NUMBER from
profile p INNER JOIN account a
on p.CUSTOMER_ID=a.CUSTOMER_ID;

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER
1	customer1	Yuvaraj	1111111
2	customer2	Tapan	2222222
3	customer3	Swathi	3333333
4	customer4	Sanjeev	4444444
5	customer5	Keerthana	5555555

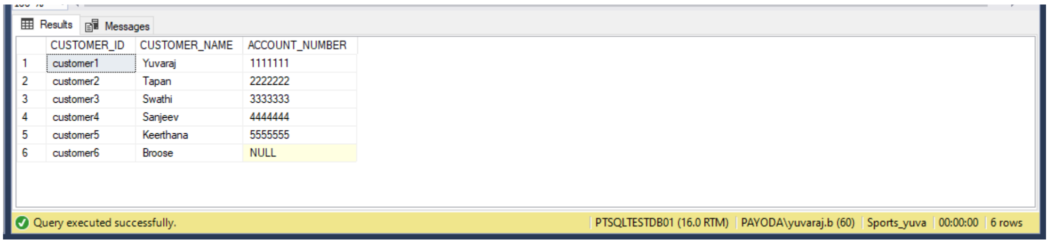
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 5 rows

2.Left join

Query:

>select p.CUSTOMER_ID,p.CUSTOMER_NAME,a.ACCOUNT_NUMBER from
profile p LEFT JOIN account a
on p.CUSTOMER_ID=a.CUSTOMER_ID;

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER
1	customer1	Yuvaraj	1111111
2	customer2	Tapan	2222222
3	customer3	Swathi	3333333
4	customer4	Sanjeev	4444444
5	customer5	Keerthana	5555555
6	customer6	Broose	NULL

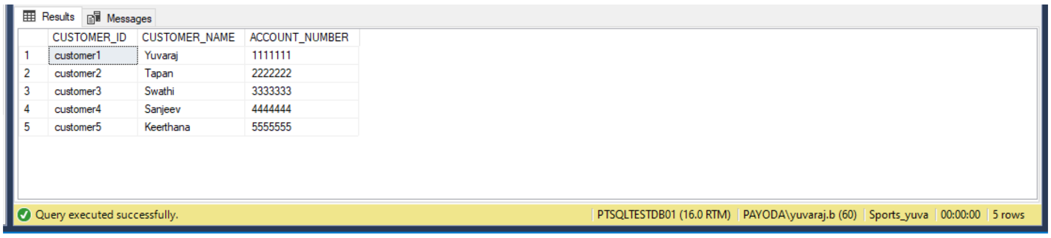
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 6 rows

3.Right Join

Query:

```
>select p.CUSTOMER_ID,p.CUSTOMER_NAME,a.ACCOUNT_NUMBER from
        profile p RIGHT JOIN account a
        on p.CUSTOMER_ID=a.CUSTOMER_ID;
```

Output:



Results | Messages

	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER
1	customer1	Yuvaraj	1111111
2	customer2	Tapan	2222222
3	customer3	Swathi	3333333
4	customer4	Sanjeev	4444444
5	customer5	Keerthana	5555555

Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 5 rows

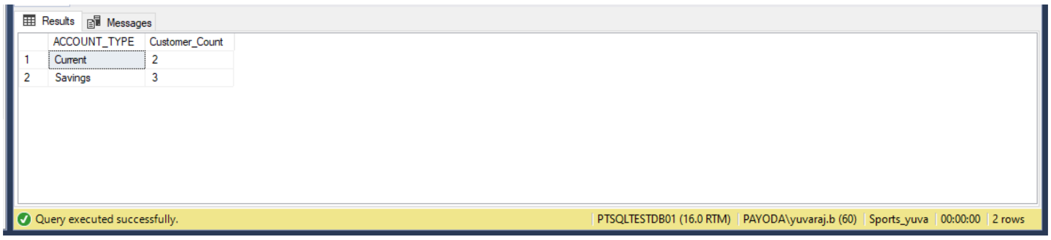
4.Aggregate Data Using Group By

1.Count of savings and current account customer using group by

Query:

```
>select ACCOUNT_TYPE,count(CUSTOMER_ID)as Customer_Count
        from account
        group by ACCOUNT_TYPE;
```

Output:



Results | Messages

	ACCOUNT_TYPE	Customer_Count
1	Current	2
2	Savings	3

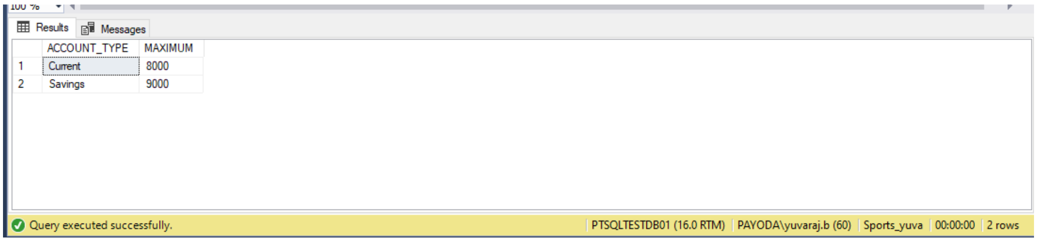
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 2 rows

2.Account type wise maximum balance in account table

Query:

```
>select ACCOUNT_TYPE,max(BALANCE)as MAXIMUM from account
  group by ACCOUNT_TYPE;
```

Output:



Results | Messages

	ACCOUNT_TYPE	MAXIMUM
1	Current	8000
2	Savings	9000

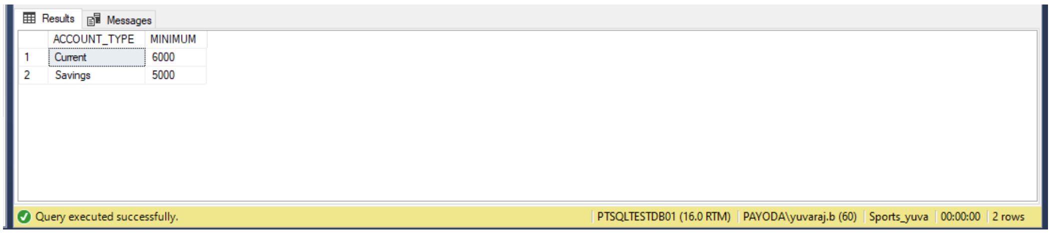
Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 2 rows

3.Account type wise minimum balance in account table

Query:

```
>select ACCOUNT_TYPE,min(BALANCE)as MINIMUM from account
  group by ACCOUNT_TYPE;
```

Output:



	ACCOUNT_TYPE	MINIMUM
1	Current	6000
2	Savings	5000

Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 2 rows

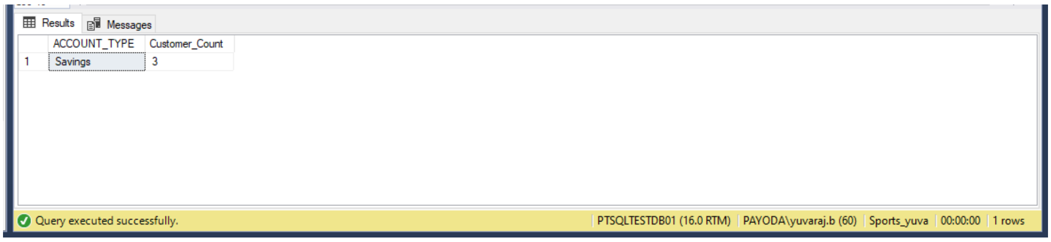
5.Filter Groups Using HAVING

1.Which account type having maximum customer

Query:

```
>select ACCOUNT_TYPE,count(CUSTOMER_ID)as Customer_Count from
 account
 group by ACCOUNT_TYPE
 having count(CUSTOMER_ID)>2;
```

Output:



	ACCOUNT_TYPE	Customer_Count
1	Savings	3

Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 1 rows

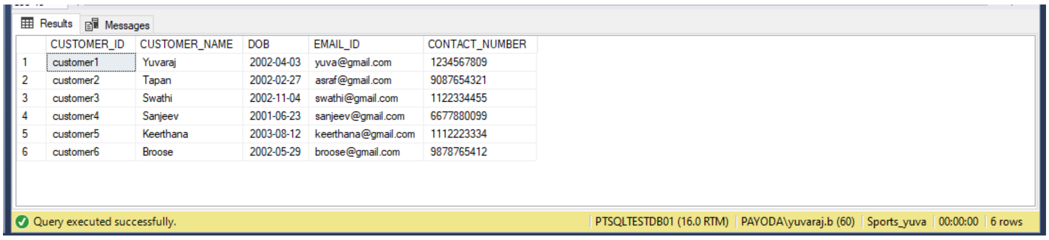
6.Order Results Using ORDER BY

1.Customer details in descending order

Query:

```
>select * from profile order by CUSTOMER_NAME desc;
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	DOB	EMAIL_ID	CONTACT_NUMBER
1	customer1	Yuvaraj	2002-04-03	yuva@gmail.com	1234567809
2	customer2	Tapan	2002-02-27	asraf@gmail.com	9087654321
3	customer3	Swathi	2002-11-04	swathi@gmail.com	1122334455
4	customer4	Sanjeev	2001-06-23	sanjeev@gmail.com	6677880099
5	customer5	Keerthana	2003-08-12	keerthana@gmail.com	1112223334
6	customer6	Broose	2002-05-29	broose@gmail.com	9878765412

Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 6 rows

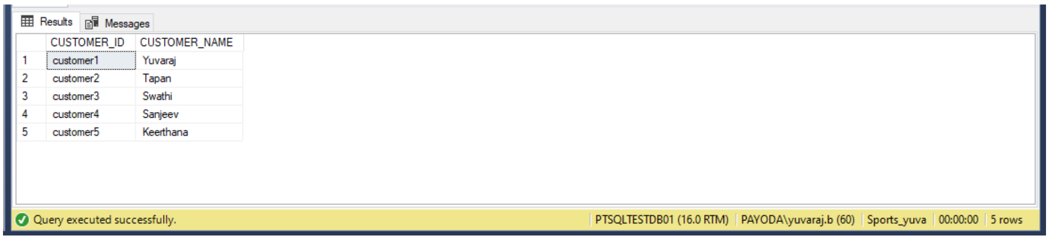
7.Retrieve Data with a Subquery

1.Find who are having account using subquery

Query:

```
>select CUSTOMER_ID,CUSTOMER_NAME from profile where
  CUSTOMER_ID in
  (select CUSTOMER_ID from account);
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME
1	customer1	Yuvaraj
2	customer2	Tapan
3	customer3	Swathi
4	customer4	Sanjeev
5	customer5	Keerthana

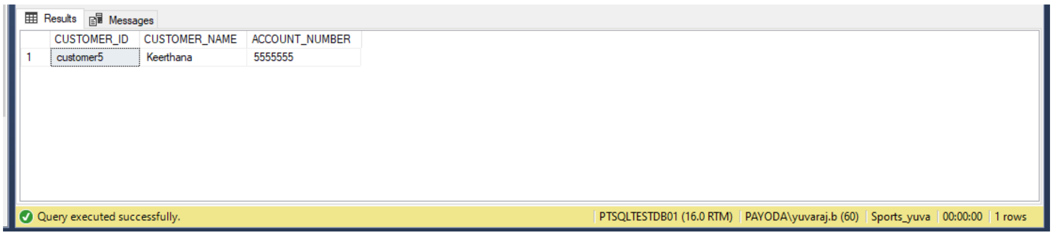
```
Query executed successfully.    PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 5 rows
```

2.Find customer details having maximum balance

Query:

```
>select CUSTOMER_ID,CUSTOMER_NAME,ACCOUNT_NUMBER from
   account where BALANCE=
   (select max(BALANCE) from account);
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	ACCOUNT_NUMBER
1	customer5	Keerthana	5555555

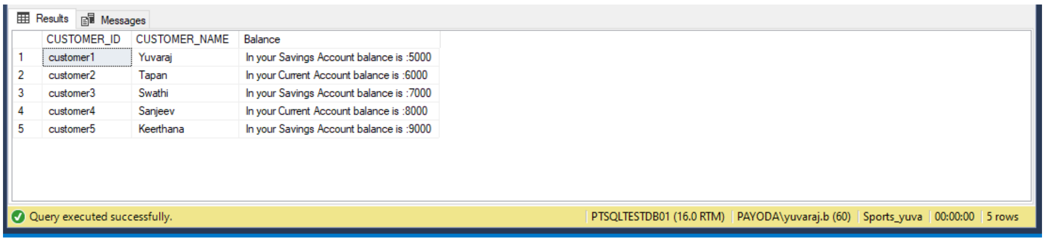
```
Query executed successfully.    PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 1 rows
```

8.Use CASE Statements

Query:

```
>select CUSTOMER_ID,CUSTOMER_NAME,
case when ACCOUNT_TYPE='Savings'
then concat('In your Savings Account balance is :',BALANCE)
when ACCOUNT_TYPE='Current'
then concat('In your Current Account balance is :',BALANCE)
end as Balance
from account;
```

Output:



	CUSTOMER_ID	CUSTOMER_NAME	Balance
1	customer1	Yuvaraj	In your Savings Account balance is :5000
2	customer2	Tapan	In your Current Account balance is :6000
3	customer3	Swathi	In your Savings Account balance is :7000
4	customer4	Sanjeev	In your Current Account balance is :8000
5	customer5	Keerthana	In your Savings Account balance is :9000

Query executed successfully. | PTSQLTESTDB01 (16.0 RTM) | PAYODA\yuvaraj.b (60) | Sports_yuva | 00:00:00 | 5 rows