

Task 2

1. Insert at least 10 sample records into each of the following tables.

- Customers
- Accounts
- Transactions

Output:

Accounts table:

	account_id	customer_id	account_type	balance
▶	10001	1	savings	10000
	10002	4	zero_balance	1000
	10003	2	savings	12000
	10004	5	current	20000
	10005	3	current	8000
	10006	6	savings	13000
	10007	8	zero_balance	2000
	10008	7	savings	16000
	10009	9	current	25000
	10010	10	savings	9000

Customers table:

	customer_id	first_name	last_name	DOB	email	phone_number	address	city	join_date
▶	1	hari	prakash	2000-02-08	hariom@gmail.com	8964232589	13th street	delhi	2020-05-18
	2	mahesh	kannan	2000-10-08	mahesh09@gmail.com	8456785456	15th north street	mumbai	2020-07-11
	3	suresh	roopan	2001-11-18	sureshk@gmail.com	9765456788	West side street	chennai	2019-07-06
	4	dayananth	selvan	2000-09-20	dayasel@gmail.com	8456789768	22B baker street	delhi	2020-12-08
	5	sri	dharshan	2002-07-04	sridhard@gmail.com	9876543456	uptown 18th street	bengaluru	2021-09-30
	6	viswa	nathan	2000-05-01	viswa05@gmail.com	9765456787	17th downtown	mumbai	2019-01-30
	7	vignesh	prasath	2001-12-09	vickyp@gmail.com	8765467898	hillside point	hyderabad	2021-11-03
	8	dinesh	kumar	2001-10-07	dineshk07@gmail.com	9876545678	7th lake point	pune	2021-10-17
	9	akash	prasath	2000-10-17	akashp@gmail.com	9876545679	23V Krypto street	noida	2020-04-13
	10	sanjeev	kumar	2002-10-14	sanjeevk@gmail.com	9876543456	43 cryo street	trivandrum	2021-06-09

Transaction table:

	transaction_id	account_id	transaction_type	amount	transaction_date
▶	3132024500	10001	deposit	2000	2024-04-01
	3132024501	10002	withdrawl	500	2024-04-03
	3132024502	10004	transfer	5000	2024-04-05
	3132024503	10003	withdrawl	2000	2024-03-29
	3132024504	10006	deposit	5000	2024-04-02
	3132024505	10005	transfer	4000	2024-04-04
	3132024506	10010	deposit	2000	2024-04-07
	3132024507	10007	withdrawl	2000	2024-04-06
	3132024508	10008	deposit	4000	2024-04-09
	3132024509	10009	transfer	6000	2024-04-08

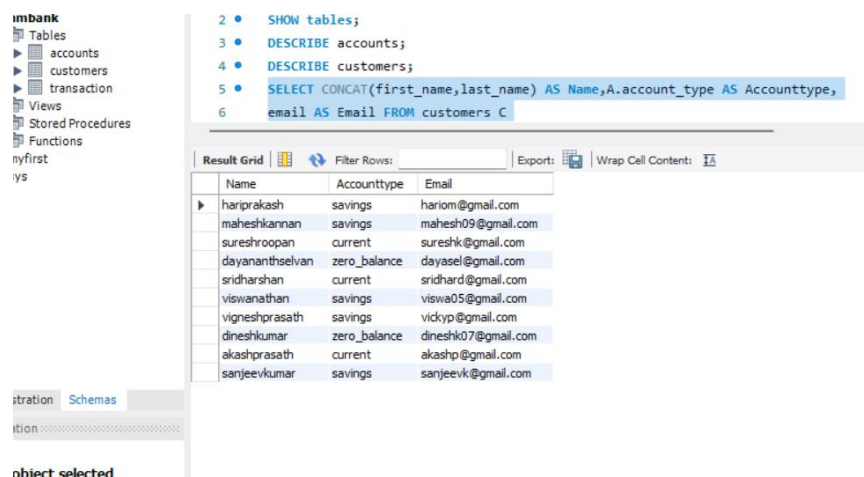
2. SQL queries:

1. Write a SQL query to retrieve the name, account type and email of all customers.

Query:

```
SELECT CONCAT(first_name,last_name) AS Name,  
A.account_type AS Accounttype, email AS Email  
FROM customers C  
INNER JOIN accounts A ON C.customer_id=A.customer_id;
```

Output:



The screenshot shows a SQL IDE interface. On the left, a sidebar lists database objects: imbank, Tables (accounts, customers, transaction), Views, Stored Procedures, Functions, nyfirst, and ys. The main area displays a SQL query in a text editor, with the following lines highlighted in blue:

```
2 • SHOW tables;  
3 • DESCRIBE accounts;  
4 • DESCRIBE customers;  
5 • SELECT CONCAT(first_name,last_name) AS Name,A.account_type AS Accounttype,  
6   email AS Email FROM customers C
```

Below the editor, a 'Result Grid' tab is active, showing the query results in a table with three columns: Name, Accounttype, and Email. The table contains 10 rows of data.

Name	Accounttype	Email
hariprakash	savings	harlom@gmail.com
maheshkannan	savings	maresh09@gmail.com
sureshroopan	current	sureshk@gmail.com
dayananthselvan	zero_balance	dayasel@gmail.com
sridharshan	current	sridhard@gmail.com
viswanathan	savings	viswa05@gmail.com
vigneshprasath	savings	vickyp@gmail.com
dineshkumar	zero_balance	dineshk07@gmail.com
akashprasath	current	akashp@gmail.com
sanjeevkumar	savings	sanjeevk@gmail.com

At the bottom of the IDE, there is a status bar with the text 'object selected'.

2. Write a SQL query to list all transaction corresponding customer.

Query:

```
SELECT C.customer_id,CONCAT(C.first_name,C.last_name)  
AS name,T.transaction_id,T.account_id,T.transaction_type,  
T.amount,T.transaction_date  
FROM transaction T
```

```

JOIN accounts A ON T.account_id=A.account_id
JOIN customers C ON A.customer_id=C.customer_id
ORDER BY C.customer_id;

```

Output:

```

62 • SELECT C.customer_id,CONCAT(C.first_name,C.last_name)
63 AS name,T.transaction_id,T.account_id,T.transaction_type,
64 T.amount,T.transaction_date
65 FROM transaction T
66 JOIN accounts A ON T.account_id=A.account_id
67 JOIN customers C ON A.customer_id=C.customer_id
68 ORDER BY C.customer_id;

```

	customer_id	name	transaction_id	account_id	transaction_type	amount	transaction_date
▶	1	hariprakash	3132024500	10001	deposit	2000	2024-04-01
	1	hariprakash	3132024511	10001	transfer	2000	2024-04-08
	2	maheshkannan	3132024503	10003	withdrawl	2000	2024-03-29
	3	sureshroopan	3132024505	10005	transfer	4000	2024-04-04
	4	dayananthselvan	3132024501	10002	withdrawl	500	2024-04-03
	5	sridharshan	3132024502	10004	transfer	5000	2024-04-05
	6	viswanathan	3132024504	10006	deposit	5000	2024-04-01
	7	vigneshprasath	3132024508	10008	deposit	4000	2024-04-09
	8	dineshkumar	3132024507	10007	withdrawl	2000	2024-04-06
	9	akashprasath	3132024509	10009	transfer	6000	2024-04-08
	10	sanjeevkumar	3132024506	10010	deposit	2000	2024-04-07

3. Write a SQL query to increase the balance of a specific account by a certain amount.

Query:

```

UPDATE hmbank.transaction
SET balance=balance + 3000
WHERE account_id=10005;

```

	3132024505	10005	transfer	4000	2024-04-04
	3132024505	10005	transfer	7000	2024-04-04



Result Grid		Filter Rows:		Edit:	
	transaction_id	account_id	transaction_type	amount	transaction_c
▶	3132024500	10001	deposit	2000	2024-04-01
	3132024501	10002	withdrawl	500	2024-04-03
	3132024502	10004	transfer	5000	2024-04-05
	3132024503	10003	withdrawl	2000	2024-03-29
	3132024504	10006	deposit	5000	2024-04-02
	3132024505	10005	transfer	7000	2024-04-04
	3132024506	10010	deposit	2000	2024-04-07
	3132024507	10007	withdrawl	2000	2024-04-06
	3132024508	10008	deposit	4000	2024-04-09
	3132024509	10009	transfer	6000	2024-04-08

4. Write a SQL query to Combine first and last names of customers as a full_name.

Query:

```
SELECT CONCAT(first_name,last_name) AS full_name
FROM customers;
```

Output:

Result Grid			 Filter Rows: <input type="text"/>
	full_name		
▶	hariprakash		
	maheshkannan		
	sureshroopan		
	dayananthselvan		
	sridharshan		
	viswanathan		
	vigneshprasath		
	dineshkumar		
	akashprasath		
	sanjeevkumar		

5. Write a SQL query to remove accounts with a balance of zero where the account type is savings.

Query:

```
DELETE FROM transaction
WHERE account_id IN (
    SELECT account_id FROM accounts
    WHERE balance = 0 AND account_type = 'savings'
);
DELETE FROM accounts
WHERE balance = 0
AND account_type = 'savings';
```

Output:

Accounts table:

	account_id	customer_id	account_type	balance
►	10001	1	savings	0
	10002	4	zero_balance	1000
	10003	2	savings	12000
	10004	5	current	20000
	10005	3	current	8000
	10006	6	savings	13000
	10007	8	zero_balance	2000
	10008	7	savings	16000
	10009	9	current	25000
	10010	10	savings	9000

	account_id	customer_id	account_type	balance
▶	10002	4	zero_balance	1000
	10003	2	savings	12000
	10004	5	current	20000
	10005	3	current	8000
	10006	6	savings	13000
	10007	8	zero_balance	2000
	10008	7	savings	16000
	10009	9	current	25000
	10010	10	savings	9000

Transaction table:

	transaction_id	account_id	transaction_type	amount	transaction_date
▶	3132024500	10001	deposit	2000	2024-04-01
	3132024501	10002	withdrawl	500	2024-04-03
	3132024502	10004	transfer	5000	2024-04-05
	3132024503	10003	withdrawl	2000	2024-03-29
	3132024504	10006	deposit	5000	2024-04-02
	3132024505	10005	transfer	4000	2024-04-04
	3132024506	10010	deposit	2000	2024-04-07
	3132024507	10007	withdrawl	2000	2024-04-06
	3132024508	10008	deposit	4000	2024-04-09
	3132024509	10009	transfer	6000	2024-04-08

	transaction_id	account_id	transaction_type	amount	transaction_date
▶	3132024501	10002	withdrawl	500	2024-04-03
	3132024502	10004	transfer	5000	2024-04-05
	3132024503	10003	withdrawl	2000	2024-03-29
	3132024504	10006	deposit	5000	2024-04-02
	3132024505	10005	transfer	4000	2024-04-04
	3132024506	10010	deposit	2000	2024-04-07
	3132024507	10007	withdrawl	2000	2024-04-06
	3132024508	10008	deposit	4000	2024-04-09
	3132024509	10009	transfer	6000	2024-04-08

6. Write a SQL query to Find customers living in a specific city.

Query:

```
SELECT * FROM customers
WHERE city= 'delhi';
```

Output:

```
25 • SELECT * FROM customers
26 WHERE city= 'delhi';
```

Result Grid Filter Rows: <input type="text"/> Edit: Export/Import: Wrap Cell Content:								
	customer_id	first_name	last_name	DOB	email	phone_number	address	city
▶	1	hari	prakash	2000-02-08	hariom@gmail.com	8964232589	13th street	delhi
	4	dayananth	selvan	2000-09-20	dayasel@gmail.com	8456789768	22B baker street	delhi

7. Write a SQL query to Get the account balance for a specific account.

Query:

```
SELECT account_id,account_type,balance
FROM accounts
WHERE account_id=10005;
```

Output:

```
30 • SELECT account_id, account_type,balance FROM accounts
31 WHERE account_id=10005;
32
```

Result Grid Filter Rows: <input type="text"/> Edit: Export/Import:			
	account_id	account_type	balance
▶	10005	current	8000

8. Write a SQL query to List all current accounts with a balance greater than 1,000 rupees.

Query:

```
SELECT account_id, account_type, balance
FROM accounts
WHERE account_type= 'current'
AND balance>1000;
```

Output:

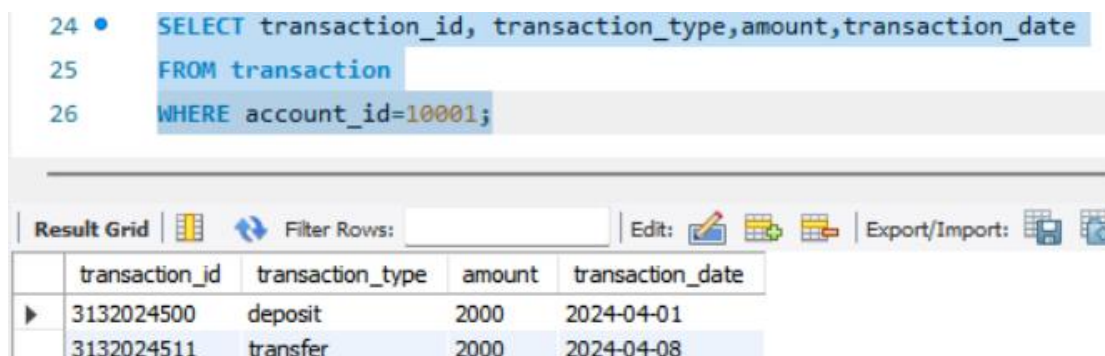
	account_id	account_type	balance
▶	10004	current	20000
	10005	current	8000
	10009	current	25000

9. Write a SQL query to Retrieve all transactions for a specific account.

Query:

```
SELECT transaction_id,
transaction_type,amount,transaction_date
FROM transaction
WHERE account_id=10001;
```

Output:



```
24 • SELECT transaction_id, transaction_type, amount, transaction_date
25 FROM transaction
26 WHERE account_id=10001;
```

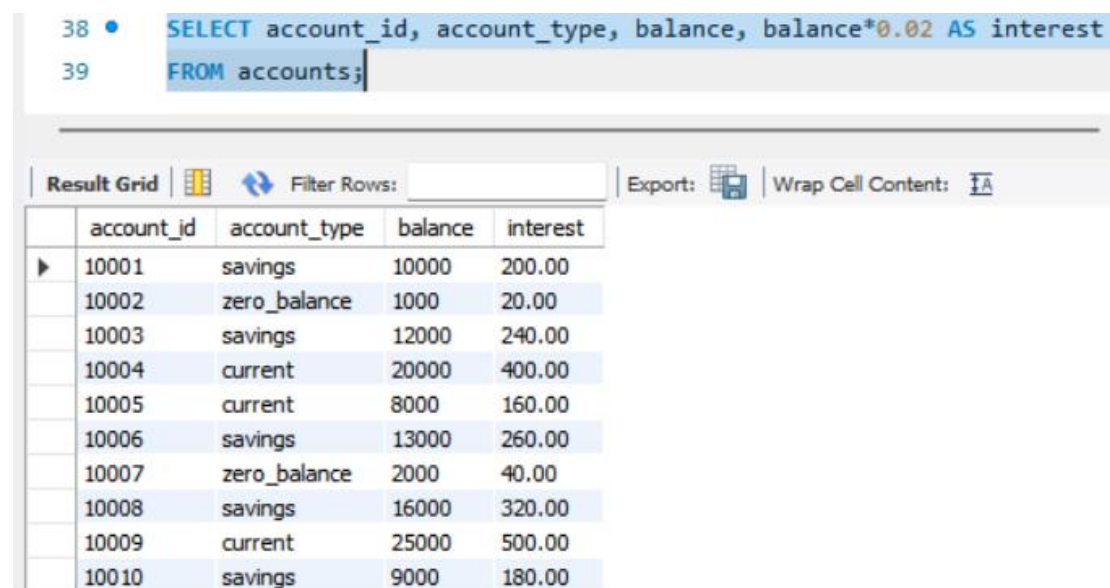
	transaction_id	transaction_type	amount	transaction_date
▶	3132024500	deposit	2000	2024-04-01
	3132024511	transfer	2000	2024-04-08

10. Write a SQL query to Calculate the interest accrued on savings accounts based on a given interest rate.

Query:

```
SELECT account_id, account_type, balance, balance*0.02 AS interest FROM accounts;
```

Ouput:



The screenshot shows a SQL query editor with the following query:

```
38 • SELECT account_id, account_type, balance, balance*0.02 AS interest
39 FROM accounts;
```

Below the query editor is a 'Result Grid' showing the output of the query. The grid has columns for account_id, account_type, balance, and interest. The data is as follows:

	account_id	account_type	balance	interest
▶	10001	savings	10000	200.00
	10002	zero_balance	1000	20.00
	10003	savings	12000	240.00
	10004	current	20000	400.00
	10005	current	8000	160.00
	10006	savings	13000	260.00
	10007	zero_balance	2000	40.00
	10008	savings	16000	320.00
	10009	current	25000	500.00
	10010	savings	9000	180.00

11. Write a SQL query to Identify accounts where the balance is less than a specified overdraft limit.

Query:

```
SELECT account_id, account_type, balance FROM accounts
WHERE balance < 3000;
```

Output:

```
36 • SELECT account_id,account_type, balance FROM accounts
37 WHERE balance<3000;
```

Result Grid | Filter Rows: | Edit: | Export/Import:

	account_id	account_type	balance
▶	10002	zero_balance	1000
	10007	zero_balance	2000

12. Write a SQL query to Find customers not living in a specific city.

Query:

```
SELECT * FROM customers
WHERE NOT city = 'delhi';
```

Output:

```
27 • SELECT * FROM customers
28 WHERE NOT city = 'delhi';
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

	customer_id	first_name	last_name	DOB	email	phone_number	address	city
▶	2	mahesh	kannan	2000-10-08	mahesh09@gmail.com	8456785456	15th north street	mumbai
	3	suresh	roopan	2001-11-18	sureshk@gmail.com	9765456788	West side street	chennai
	5	sri	dharshan	2002-07-04	sridhard@gmail.com	9876543456	uptown 18th street	bengaluru
	6	viswa	nathan	2000-05-01	viswa05@gmail.com	9765456787	17th downtown	mumbai
	7	vignesh	prasath	2001-12-09	vickyp@gmail.com	8765467898	hillside point	hyderabad
	8	dinesh	kumar	2001-10-07	dineshk07@gmail.com	9876545678	7th lake point	pune
	9	akash	prasath	2000-10-17	akashp@gmail.com	9876545679	23V Krypto street	noida
	10	sanjeev	kumar	2002-10-14	sanjeevk@gmail.com	9876543456	43 cryo street	trivandrum