**Banking System**

**Task 1:**

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 int 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 (1001, “Afiya”, “Farheen”, “2003-11-29”, “afiyafarheen@gmail.com”, 987654321, “21, new street, ramapuram, chennai”)

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

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

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

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

Insert into customers(1006, “Abishek”,”Rupan”,”2002-08-07”,”abishekrupan@gmail.com”,9872527167,”23,Krishna Street, Royapuram, Chennai”)

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

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

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

Insert into customers(1010,”Miyanna”,”Nigar”,”2004-06-11”,”miyannanigar@gmail.com”,7282973897,”8, old street, T nagar, Chennai”)

**Inserting into Accounts Table:**

Insert into Accounts(1230,1001,”savings”,20000)

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

Insert into accounts(1232,1003,”current”,30000)

Insert into accounts(1233,1004,”savings”,35000)

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

Insert into accounts(1235,1006,”current”,40000)

Insert into accounts(1236,1007,”savings”,45000)

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

Insert into accounts(1238,1009,”savings”,33000)

Insert into accounts(1239,1010,”current”,37500)

**Inserting into Transactions Table:**

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

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

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

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

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

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

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

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

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

Insert into transactions(0043,1239,”deposit”,15000,”2025-02-30”)

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)

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=1230

8)select \* from accounts

Where balance>1000

9)

10)

11) select \* from accounts

Where balance<1000

12) select \* from customers

Where address not like “%chennai%”

**Task 3:**

1)select avg(balance) from accounts

2)select balace from accounts

Order by balance desc

Limit 10

3)select sum(amount)

From transactions

Where transaction\_type = deposit

And date = “2025-10-23”

4)

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.first\_name, c.last\_name

From customers c inner join accounts a

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

Group by c.customer\_id

Having count(\*)>1

9) select sum(t1.amount)-sum(t2.amount) as “difference”

From transactions t1 inner join transactions t2

On t1.account\_id=t2.account\_id

Where t1.transaction\_type=”deposits”

And t2.transaction\_type=”withdrawal”

Groupby t1.account\_id

10)

11) select 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, c.first\_name, c.last\_name, sum(a.balance), a.account\_type

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)

**Task 4:**

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

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) from accounts

Group by (select customer\_id from accounts

Group by customer\_id

Having count(account\_id)>1)

3)select \* 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 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)

8)

9)select \* from transactions

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

Where customer\_id=1002)

10)select account\_type, sum(balance)

From accounts

Group by account\_type