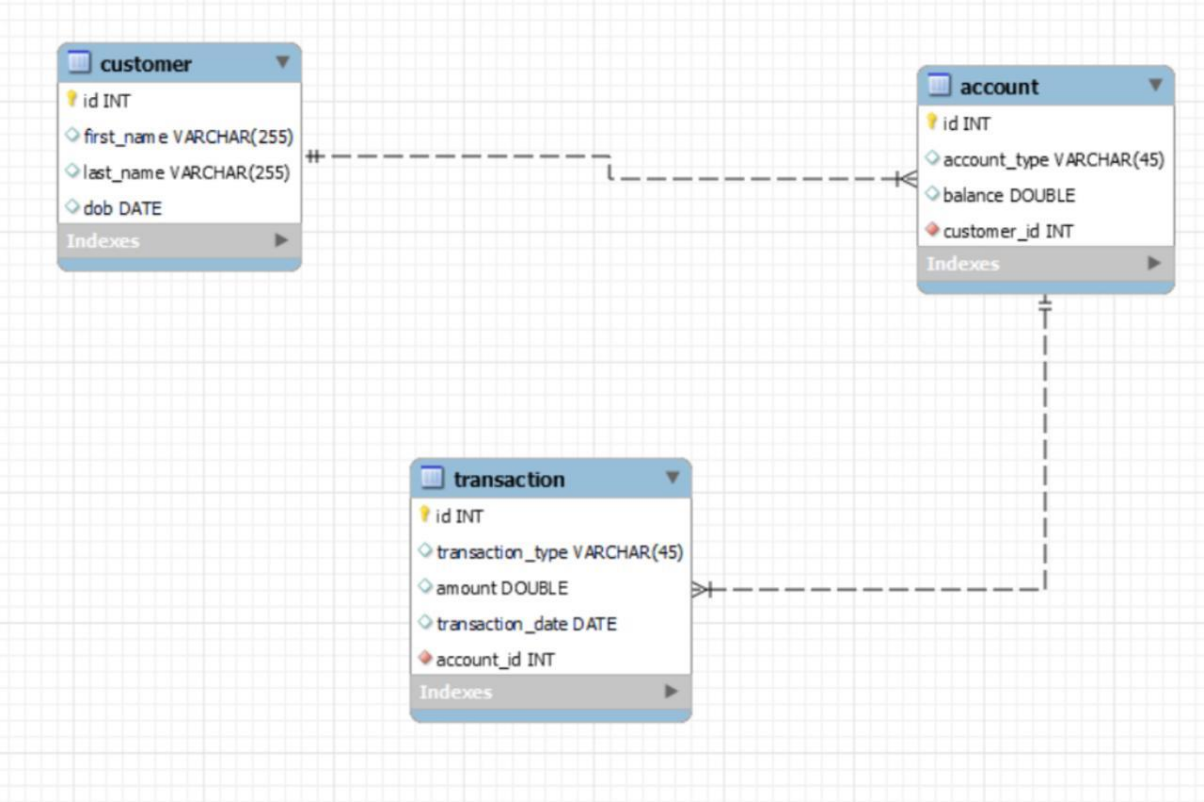
Banking Assignment

Task -1



Task-2 :

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

```
select c.first_name,a.account_type

from customer c join account a on c.id=a.customer_id ;
```

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

```
select c.first_name,t.transaction_type,t.amount,transaction_date

from customer c join account a on c.id=a.customer_id join transaction t on t.account_id=a.id;
```

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

```
update account
set balance=balance+20000
where id=5;
select * from account;
```

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

```
select concat(first_name,' ',last_name) as Full_name
from customer;
```

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

```
delete from account
where account_type="savings" and balance=0;
```

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

```
Select * from customer
Where city in('chennai');
```

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

```
select c.first_name,a.balance
from customer c join account a on c.id=a.customer_id
where c.id=1;
```

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

```
select c.first_name,a.account_type,a.balance
from customer c join account a on c.id=a.customer_id
where balance > 20000;
```

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

```
select c.first_name,t.transaction_type,t.amount,transaction_date
from customer c join account a on c.id=a.customer_id join transaction t on t.account_id=a.id
where c.id=1;
```

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

```
select (sum(balance)*0.1) as Interest_acquired
from account
where account_type="savings";
```

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

```
select c.first_name,a.account_type,a.balance
from customer c join account a on c.id=a.customer_id
where a.balance <100000;
```

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

```
select * from customer where city not in (‘chennai’);
```

Task -3

-- 1. Write a SQL query to Find the average account balance for all customers.

```
select customer_id, AVG(balance)
from account
group by customer_id;
```

-- 2. Write a SQL query to Retrieve the top 10 highest account balances.

```
select balance
from account
order by balance DESC
limit 0,3;
```

/* 3. Write a SQL query to Calculate Total Deposits for All Customers in specific date. Also display name of the customer */

```
select c.first_name,c.last_name,t.transaction_type, t.amount, t.transaction_date
from transaction t JOIN account a ON a.id = t.account_id JOIN customer c ON c.id = a.customer_id
where t.transaction_date = '2024-02-02' AND t.transaction_type='withdrawal';
```

-- 4. Write a SQL query to Find the Oldest and Newest Customers.

```
(select first_name,dob,'oldest' as status from customer order by dob limit 0,1)
UNION
(select first_name,dob,'youngest' as status from customer order by dob DESC limit 0,1);
```

-- 5. Write a SQL query to Retrieve transaction details along with the account type.

```
select a.account_type,t.transaction_type ,t.amount,t.transaction_date
from account a join transaction t on a.id=t.account_id;
```

-- 6. Write a SQL query to Get a list of customers along with their account details.

```
select c.first_name,a.account_type,a.balance
from customer c join account a on c.id=a.customer_id;
```

-- 7. Write a SQL query to Retrieve transaction details along with customer information for a

```
-- specific account.
select c.first_name,t.transaction_type,t.amount
from customer c join account a on c.id=a.customer_id join transaction t on a.id=t.account_id;
```

-- 8. Write a SQL query to Identify customers who have more than one account.

```
select c.first_name,count(c.id) as Number_of_accounts
from customer c JOIN account a ON c.id = a.customer_id
group by a.customer_id
having Number_of_accounts>1;
```

-- 9. Write a SQL query to Calculate the difference in transaction amounts between deposits and withdrawals.

```
select MAX(amount) - MIN(amount) as difference
from
((select transaction_type ,SUM(amount) as amount, 'deposit' as op
from transaction
where transaction_type ='deposit' )
union
(select transaction_type , SUM(amount) as amount, 'withdrawal' as op
from transaction
where transaction_type ='withdrawal')) AS T;
```

-- 10. Write a SQL query to Calculate the average daily balance for each account over a specified period.

```
select c.id,avg(a.balance)
from account a join customer c on c.id=a.customer_id
group by a.customer_id;
```

-- 11. Calculate the total balance for each account type.

```
select a.account_type,sum(a.balance)
from account a
group by a.account_type;
```

-- 12. Identify accounts with the highest number of transactions order by descending order.

```
select c.first_name,a.account_type,t.account_id,count(t.id) as
no_of_transaction

from account a join transaction t on a.id=t.account_id join customer c on
c.id=a.customer_id

group by t.account_id

order by no_of_transaction desc

limit 1;
```

-- 13. List customers with high aggregate account balances, along with their account types.

```
select c.id,c.first_name,a.account_type,a.balance

from customer c join account a on c.id=a.customer_id

order by a.balance desc

limit 1;
```

-- 14. Identify and list duplicate transactions based on transaction amount, date, and account

```
select amount,transaction_date,account_id,count(id) as duplicates

from transaction

group by amount,transaction_date,account_id

having duplicates>1;
```

Task-4

1. Retrieve the customer(s) with the highest account balance.

```
select * from account
where balance=(select max(balance) from account);
```

2. Calculate the average account balance for customers who have more than one account.

```
select avg(balance)
from account
where customer_id IN (select customer_id
from account
group by customer_id
having count(id) > 1);
```

3. Retrieve accounts with transactions whose amounts exceed the average transaction amount.

```
select id,amount from transaction
where amount> (select avg(amount)
from transaction);
```

4.Identify customers who have no recorded transactions.

```
select id,first_name
from customer
where id IN (select customer_id
from account where id NOT IN (select
account_id from transaction));
```

5. Calculate the total balance of accounts with no recorded transactions.

```
select sum(balance) from account where id NOT IN(select
account_id from transaction);
```

6. Retrieve transactions for accounts with the lowest balance.

```
select t.* from transaction t join account a on t.account_id=a.id
where a.balance=(select
min(balance) from account);
```

7. Identify customers who have accounts of multiple types.

```
select * from customer where id in (select
a.customer_id from account a group by a.customer_id
having count(distinct a.account_type)>1);
use banking;
```

8. Calculate the percentage of each account type out of the total number of accounts.

```
select account_type,count(id) as account_count,
(count(id) * 100.0) / (SELECT count(id) FROM account) as percentage
from account
group by account_type;
```

9. Retrieve all transactions for a customer with a given customer_id.

```
select *
from transaction
where account_id IN (select id
from account
```

where customer_id=1);

10. Calculate the total balance for each account type, including a subquery within the SELECT clause.

```
select account_type, SUM(balance) as total_balance
from account
group by account_type;
```