Assessment(Module-5 Dbms)

- **Write SQL query to solve the problem given below**

Here we are talking about the Bank related information of a person.

For which you need to create three tables named as Bank, Account holder and Loan table.

And solve the problem stated below.

Create a Bank table, attributes are : branch id, branch name, branch city

Create a Loan table, attributes are : loan no, branch id, account holder's id, loan amount and loan type

Create a table named as Account holder for the same scenario containing the attributes are account holder's id, account no, account holder's name, city,contact, date of account created, account status (active or terminated), account type and balance.

Create Table Name :

Bank, Loan and Account Holder

Bank

```
CREATE TABLE Bank (
branch_id INT PRIMARY KEY,
branch_name VARCHAR(100),
branch_city VARCHAR(100)
```

);

branch_id	branch_name	branch_city

```
INSERT INTO Bank (branch_id, branch_name, branch_city)
    VALUES
    (1, 'Central Branch', 'Ahmedabad'),
    (2, 'North Branch', 'Mumbai'),
    (3, 'South Branch', 'Delhi');
```

branch_id	branch_name	branch_city
1	Central Branch	Ahmedabad
2	North Branch	Mumbai
3	South Branch	Delhi

Account Holder

```
CREATE TABLE Account_holder (
 account_holder_id INT PRIMARY KEY,
 account_no VARCHAR(20),
 account_holder_name VARCHAR(100),
 city VARCHAR(100),
```

```
    contact VARCHAR(15),
    date_of_account_created DATE,
    account_status VARCHAR(10),  -- 'active' or
'terminated'
    account_type VARCHAR(20),
    balance DECIMAL(15, 2)
);
```


```
INSERT INTO Account_holder (account_holder_id,
account_no, account_holder_name, city, contact,
date_of_account_created, account_status,
account_type, balance)
VALUES
(1001, 'A001', 'John Doe', 'Ahmedabad',
'9876543210', '2022-05-10', 'active', 'Savings',
150000.00),
(1002, 'A002', 'Jane Smith', 'Mumbai', '8765432109',
'2021-06-20', 'active', 'Current', 250000.00),
(1003, 'A003', 'Alex Johnson', 'Ahmedabad',
'7654321098', '2023-02-15', 'terminated', 'Savings',
50000.00);
```

account_holder_id	account_no	account_holder_name	city	contact	date_of_account_created	account_status	account_type	balance
1001	A001	John Doe	Ahmedabad	9876543210	2022-05-10	active	Savings	150000.00
1002	A002	Jane Smith	Mumbai	8765432109	2021-06-20	active	Current	250000.00
1003	A003	Alex Johnson	Ahmedabad	7654321098	2023-02-15	terminated	Savings	50000.00

Loan

```
CREATE TABLE Loan (
    loan_no INT PRIMARY KEY,
    branch_id INT,
    account_holder_id INT,
    loan_amount DECIMAL(15, 2),
    loan_type VARCHAR(20),
    FOREIGN KEY (branch_id) REFERENCES Bank(branch_id),
    FOREIGN KEY (account_holder_id) REFERENCES
Account_holder(account_holder_id)
);
```

loan_no	branch_id	account_holder_id	loan_amount	loan_type

```
INSERT INTO Loan (loan_no, branch_id, account_holder_id,
loan_amount, loan_type)
VALUES
(101, 1, 1001, 50000.00, 'Home Loan'),
(102, 2, 1002, 200000.00, 'Car Loan'),
```

(103, 1, 1003, 100000.00, 'Personal Loan');

loan_no	branch_id	account_holder_id	loan_amount	loan_type
101	1	1001	50000.00	Home Loan
102	2	1002	200000.00	Car Loan
103	1	1003	100000.00	Personal Loan

SQL Queries

● Consider an example where there's an account holder table where we are doing an intra bank transfer i.e. a person holding account A is trying to transfer $100 to account B.

- for this you have to make a transaction in sql which can transfer fund from account A to B

- Make sure after the transaction the account information have to be updated for both the credit account and the debited account

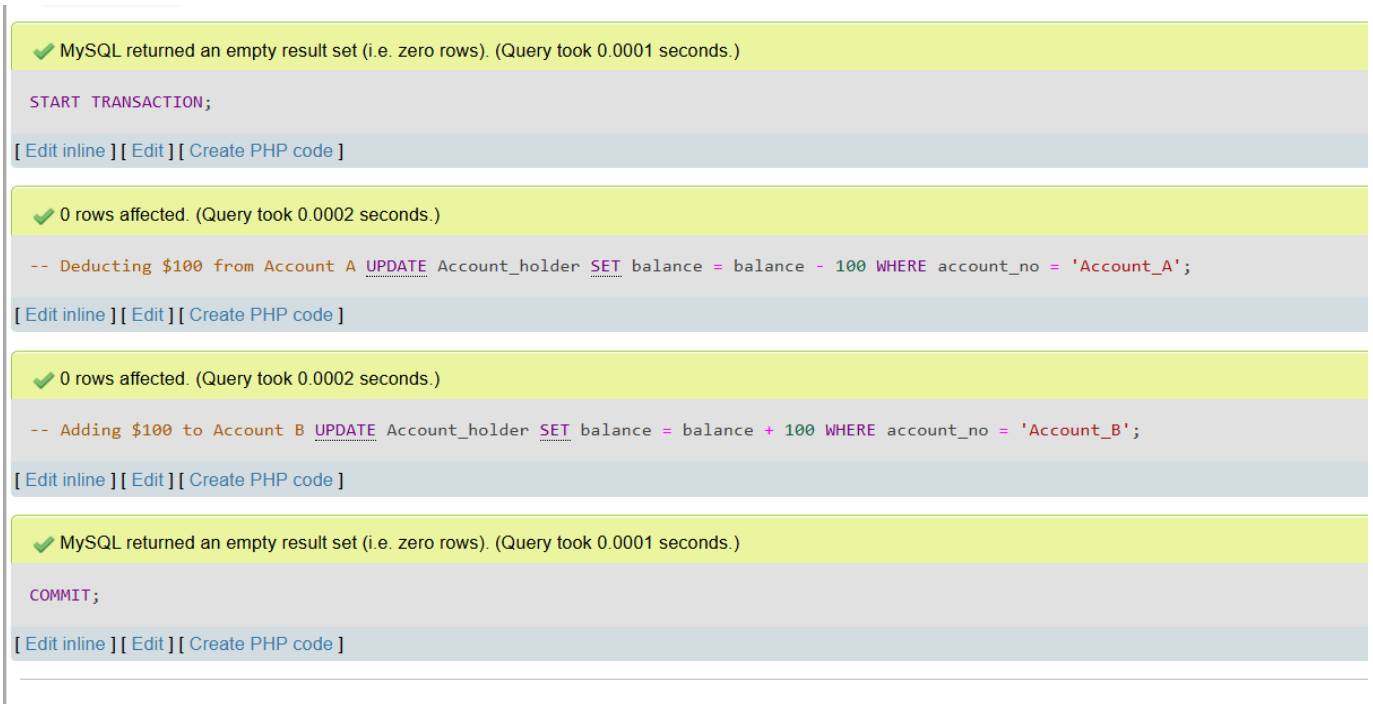
```
START TRANSACTION;

-- Deducting $100 from Account A
UPDATE Account_holder
```

```
SET balance = balance - 100
WHERE account_no = 'Account_A';

-- Adding $100 to Account B
UPDATE Account_holder
SET balance = balance + 100
WHERE account_no = 'Account_B';

COMMIT;
```



- Also fetch the details of the account holder who are related from the same city

```
SELECT account_holder_name, city, contact
FROM Account_holder A1
```

```
WHERE EXISTS (
   SELECT 1 FROM Account_holder A2
   WHERE A1.city = A2.city AND A1.account_holder_id <>
A2.account_holder_id
);
```

account_holder_name	city	contact
Alex Johnson	Ahmedabad	7654321098
John Doe	Ahmedabad	9876543210

● Write a query to fetch account number and account holder name, whose accounts were created after 15th of any month

```
SELECT account_no, account_holder_name
FROM Account_holder
WHERE DAY(date_of_account_created) > 15;
```

account_no	account_holder_name
A002	Jane Smith

● Write a query to display the city name and count the branches in that city. Give the count of branches an alias name of Count_Branch.

```
SELECT branch_city, COUNT(branch_id) AS Count_Branch
FROM Bank
GROUP BY branch_city;
```

branch_city	Count_Branch
Ahmedabad	1
Delhi	1
Mumbai	1

● Write a query to display the account holder's id, account holder's name, branch id, and loan amount for people who have taken loans. (NOTE : use sql join concept to solve the query)

```
SELECT A.account_holder_id, A.account_holder_name, L.branch_id,
L.loan_amount
FROM Account_holder A
JOIN Loan L ON A.account_holder_id = L.account_holder_id;
```

account_holder_id	account_holder_name	branch_id	loan_amount
1001	John Doe	1	50000.00
1002	Jane Smith	2	200000.00
1003	Alex Johnson	1	100000.00