PRACTICAL-7 **DATE:**_____

AIM:. For a given set of relation tables perform the following:

i. Creating views (with and without check option),

ii. Dropping views, Selecting from a view

INPUT:-

Step-1 : Create BankCustomers, Accounts and Transactions table

```
// BankCustomers Table
CREATE TABLE BankCustomers (
    CustomerID INT AUTO_INCREMENT PRIMARY KEY,
    FirstName VARCHAR(50),
    LastName VARCHAR(50),
    DateOfBirth DATE,
    Email VARCHAR(100)
);
// Accounts Table
CREATE TABLE Accounts (
    AccountID INT AUTO_INCREMENT PRIMARY KEY,
    CustomerID INT,
    AccountType VARCHAR(20),
    Balance DECIMAL(10,2),
    FOREIGN KEY (CustomerID) REFERENCES BankCustomers
                                        (CustomerID)
);
// Transaction Table
CREATE TABLE Transaction (
    TransactionID INT AUTO_INCREMENT PRIMARY KEY,
    AccountID INT,
    TransactionDate DATE,
    Amount DECIMAL(10,2),
    TransactionType VARCHAR(10),
    FOREIGN KEY (AccountID) REFERENCES Accounts
                                        (AccountID)
);
```

Step-2 : Insert data into BankCustomers, Accounts and Transaction table.

```
// BankCustomers Table
INSERT INTO BankCustomers (FirstName, LastName, DateOfBirth,
                           Email)
  VALUES
    ('John', 'Doe', '1980-05-15', 'john.doe@gmail.com'),
    ('Jane', 'Smith', '1990-07-22', 'jane.smith@gmail.com'),
    ('Alan', 'Brocon', '1985-09-30', 'alan.brocon@gmail.com');
// Accounts Table
INSERT INTO Accounts (CustomerID, AccountType, Balance)
  VALUES
      (1, 'Savings', 5000.00),
      (1, 'Checking', 2000.00),
      (2, 'Checking', 1500.00),
      (3, 'Savings', 4000.00);
// Transactions Table
INSERT INTO Transactions (AccountID, TransactionDate, Amount,
                          TransactionType)
  VALUES
      (1, '2024-08-01', 1000.00, 'Deposit'),
      (2, '2024-08-02', 500.00, 'Withdrawal'),
      (3, '2024-08-03', 200.00, 'Deposit'),
      (4, '2024-08-04', 800.00, 'Withdrawal');
```

Step-3 : Fetch the data

```
// BankCustomers Table
SELECT * FROM BankCustomers;
// Accounts Table
SELECT * FROM Accounts;
// Transactions Table
SELECT * FROM Transactions;
```

// Bank Customers Table

CustomerID	FirstName	LastName	DateofBirth	Email
1	John	Doe	1980-05-15	john.doe@gmail.com
2	Jane	Smith	1990-07-22	jane.smith@gmail.com
3	Alan	Brown	1985-09-30	alan.brown@gmail.

// Accounts Table

CustomerID	AccountID	AccountType	Balance
1	1	Savings	5000.00
1	2	Checking	2000.00
2	3	Checking	1500.00
3	4	Savings	4000.00

// Transactions Table

TransactionID	AccountID	TransactionDate	Amount	TransactionDate
1	1	'2024-08-01'	1000.00	Deposit
2	2	'2024-08-02'	500.00	Withdrawal
3	3	'2024-08-03'	200.00	Deposit
4	4	'2024-08-04'	800.00	Withdrawal

a). Creating Views :-

i). Creating a Simple view :-

```
CREATE VIEW CustomerAccountsSummary AS
SELECT
    c.CustomerID,
    c.FirstName,
    c.LastName,
    a.AccountType,
    a.Balance
FROM
    BankCustomers c
INNER JOIN
    Accounts a ON c.CustomerID = a.CustomerID ;
```

ii). Creating a view with 'CHECK OPTION' :-

```
CREATE VIEW HighBalanceAccounts AS
SELECT
    AccountID,
    CustomerID,
    AccountType,
    Balance
FROM
    Accounts
WHERE
    Balance > 3000
WITH CHECK OPTION ;
```

b). Dropping / Selecting a view :-

i). Selecting from a view :-

```
SELECT * FROM CustomerAccountsSummary ;
```

```
SELECT * FROM HighBalanceAccounts ;
```

CustomerID	FirstName	LastName	AccountType	Balance
1	John	Doe	Savings	5000.00
1	John	Doe	Checking	2000.00
2	Jane	Smith	Checking	1500.00
3	Alan	Brown	Savings	4000.00

AccountID	CustomerID	AccountType	Balance
1	1	Savings	5000.00
3	1	Checking	4000.00

iii. Dropping a view :-

```
DROP VIEW CustomerAccountsSummary;
```

```
DROP VIEW HighBalanceAccounts;
```