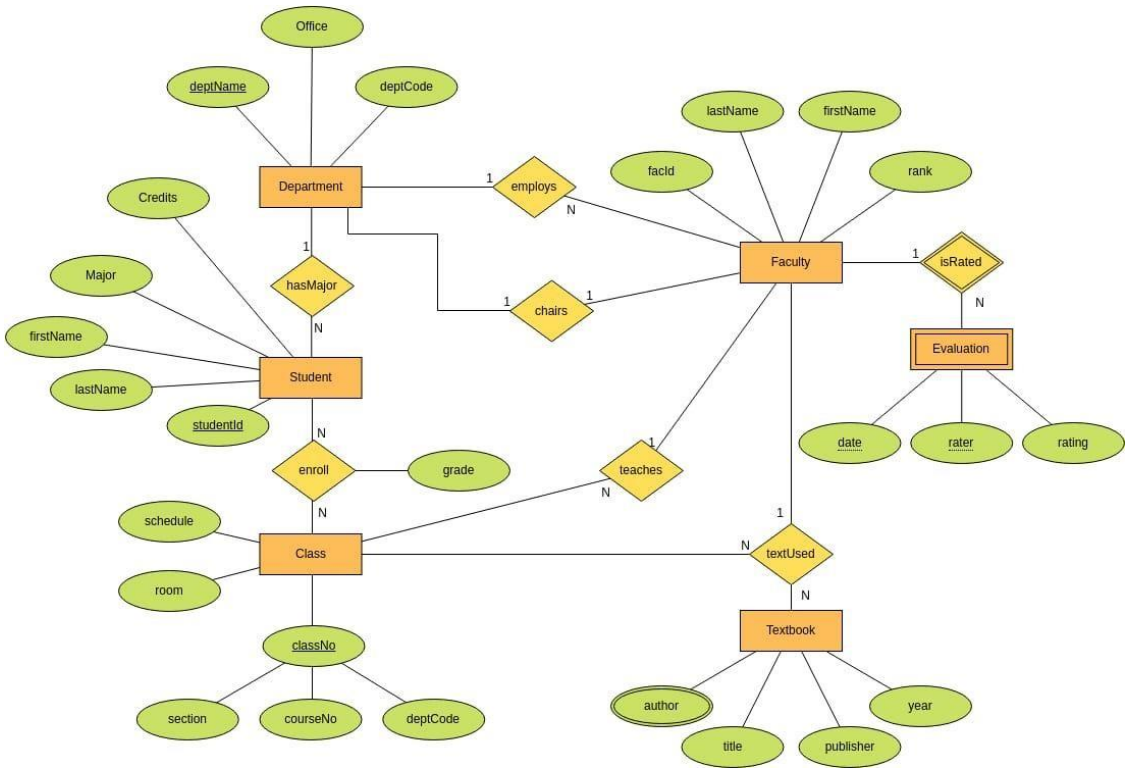
SQL Project

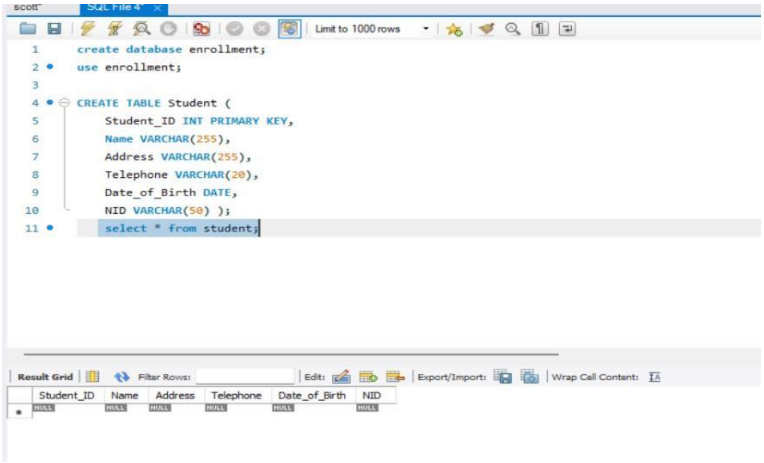
✞ E-R Diagrams

1. Enrollment System



- Student Table

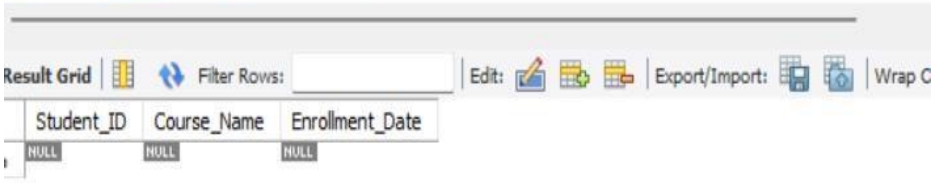
```
CREATE TABLE Student (
    Student_ID INT PRIMARY KEY,
    Name VARCHAR(255),
    Address VARCHAR(255),
    Telephone VARCHAR(20),
    Date_of_Birth DATE,
    NID VARCHAR(50) );
```



- **Enrollment Table**

```
CREATE TABLE Enrollment (
    Student_ID INT,
    Course_Name VARCHAR(255),
    Enrollment_Date DATE,
    PRIMARY KEY (Student_ID, Course_Name),
    FOREIGN KEY (Student_ID) REFERENCES Student(Student_ID)
);
select * from Enrollment;
```

```
14
15 •    CREATE TABLE Enrollment (
16          Student_ID INT,
17          Course_Name VARCHAR(255),
18          Enrollment_Date DATE,
19          PRIMARY KEY (Student_ID, Course_Name),
20          FOREIGN KEY (Student_ID) REFERENCES Student(Student_ID)
21      );
22 •    select * from Enrollment;
```



• Lecture Table

```
CREATE TABLE Lecture (
CC_ID INT PRIMARY KEY,
   Subject VARCHAR(255),
   Time TIME,
   Date DATE,
   Lecturer_Name VARCHAR(255)
);

select * from Lecture ;
```

```
3
4 •  CREATE TABLE Lecture (
5        CC_ID INT PRIMARY KEY,
6        Subject VARCHAR(255),
7        Time TIME,
8        Date DATE,
9        Lecturer_Name VARCHAR(255)
0    );
1
2 •  select * from Lecture ;
```

sult Grid | Filter Rows: | Edit: | Export/Import: | Wr

CC_ID	Subject	Time	Date	Lecturer_Name
NULL	NULL	NULL	NULL	NULL

• Subjects Table

```
CREATE TABLE Subjects (
    Subject_Code VARCHAR(50) PRIMARY KEY,
    Subject_Unit INT,
    Subject_Desc TEXT
);
select * from Subjects;
```

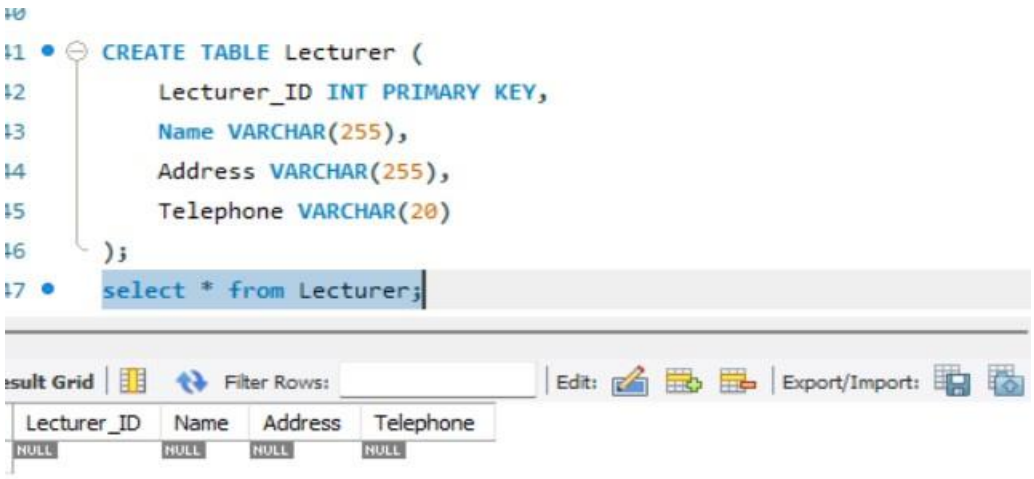
```
31
32 •  select * from Lecture ;
33
34 •  CREATE TABLE Subjects (
35        Subject_Code VARCHAR(50) PRIMARY KEY,
36        Subject_Unit INT,
37        Subject_Desc TEXT
38    );
39 •  select * from Subjects;
40
```

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

Subject_Code	Subject_Unit	Subject_Desc
NULL	NULL	NULL

• Lecturer Table

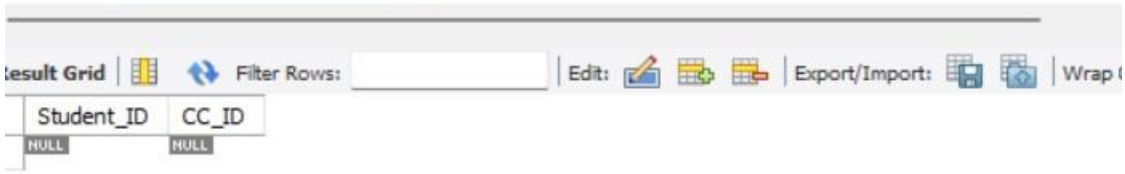
```
CREATE TABLE Lecturer (
    Lecturer_ID INT PRIMARY KEY,
    Name VARCHAR(255),
    Address VARCHAR(255),
    Telephone VARCHAR(20)
);
select * from Lecturer;
```



• Enrolls Table

```
CREATE TABLE Enrolls (
    Student_ID INT,
    CC_ID INT,
    PRIMARY KEY (Student_ID, CC_ID),
    FOREIGN KEY (Student_ID) REFERENCES Student(Student_ID),
    FOREIGN KEY (CC_ID) REFERENCES Lecture(CC_ID)
);
```

```
49 • CREATE TABLE Enrolls (
50       Student_ID INT,
51       CC_ID INT,
52       PRIMARY KEY (Student_ID, CC_ID),
53       FOREIGN KEY (Student_ID) REFERENCES Student(Student_ID),
54       FOREIGN KEY (CC_ID) REFERENCES Lecture(CC_ID)
55   );
56
57 •   select * from Enrolls;
```



select * from Enrolls;

• Lecturers Table

CREATE TABLE Lectures (

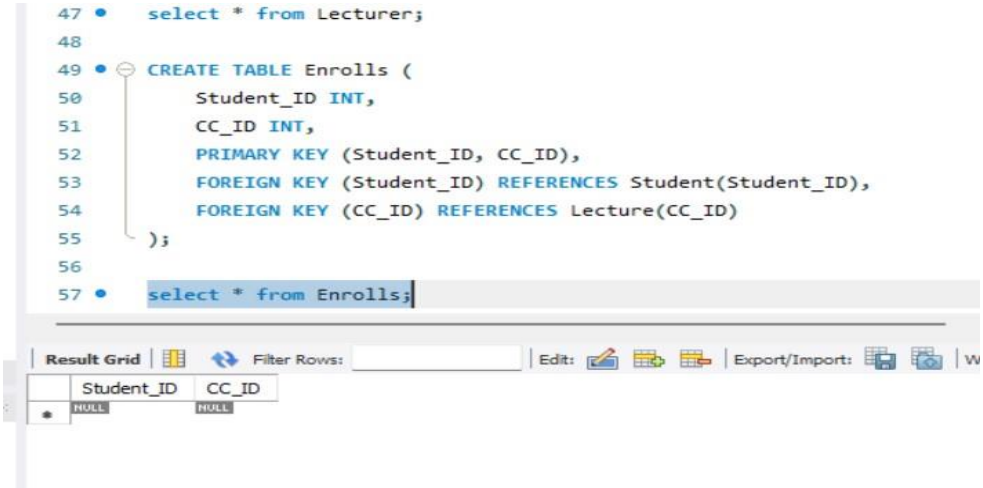
CC_ID INT,

Lecturer_ID INT,

PRIMARY KEY (CC_ID, Lecturer_ID),

FOREIGN KEY (CC_ID) REFERENCES Lecture(CC_ID),

FOREIGN KEY (Lecturer_ID) REFERENCES Lecturer(Lecturer_ID)



);

select * from Lectures;

• Bank Table

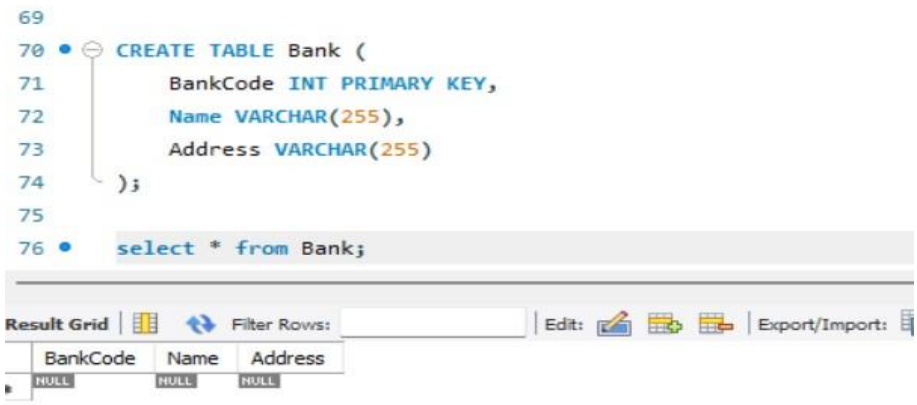
CREATE TABLE Bank (

Bank code INT PRIMARY KEY,

Name VARCHAR(255),

Address VARCHAR(255)

);



select * from Branch

• Customer Table

CREATE TABLE Customer (

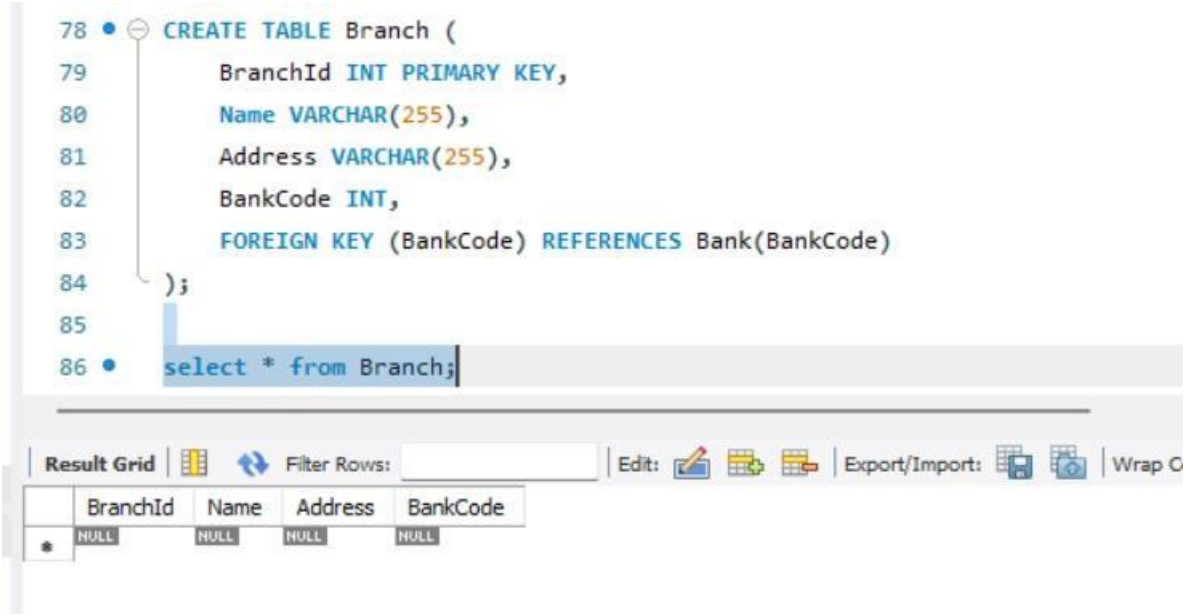
CustomerId INT PRIMARY KEY,

Name VARCHAR(255),

Phone VARCHAR(20),

Address VARCHAR(255)

);



select * from Customer;

• Account Table

CREATE TABLE Account (

AccountNo INT PRIMARY KEY,

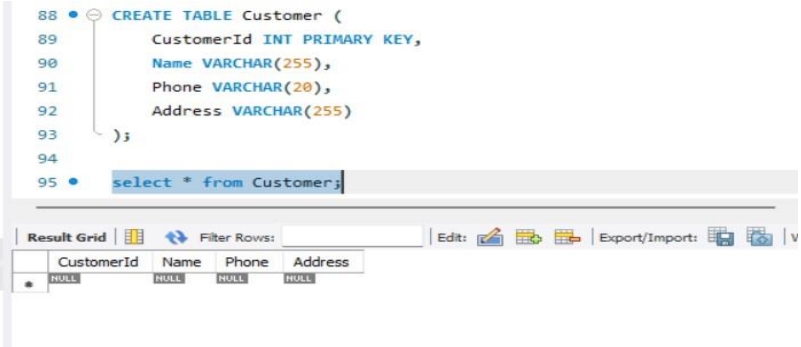
AccountType VARCHAR(50),

Balance DECIMAL(15,2),

BranchId INT,

FOREIGN KEY (BranchId) REFERENCES Branch(BranchId)

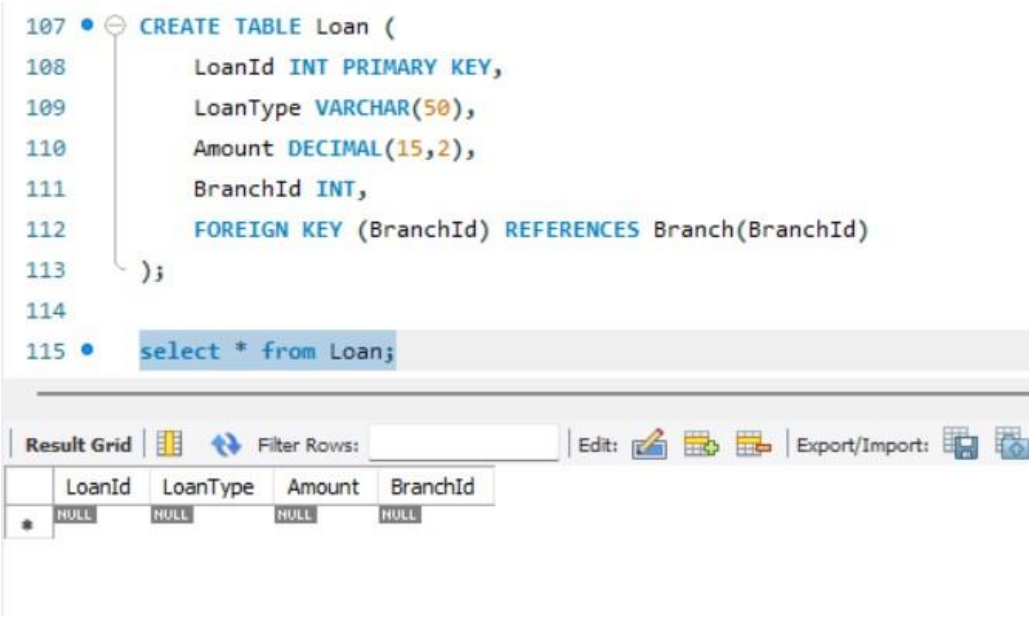
);



select * from Account;

• Loan Table

```
CREATE TABLE Loan (
    LoanId INT PRIMARY KEY,
    LoanType VARCHAR(50),
    Amount DECIMAL(15,2),
    BranchId INT,
    FOREIGN KEY (BranchId) REFERENCES Branch(BranchId)
);
```

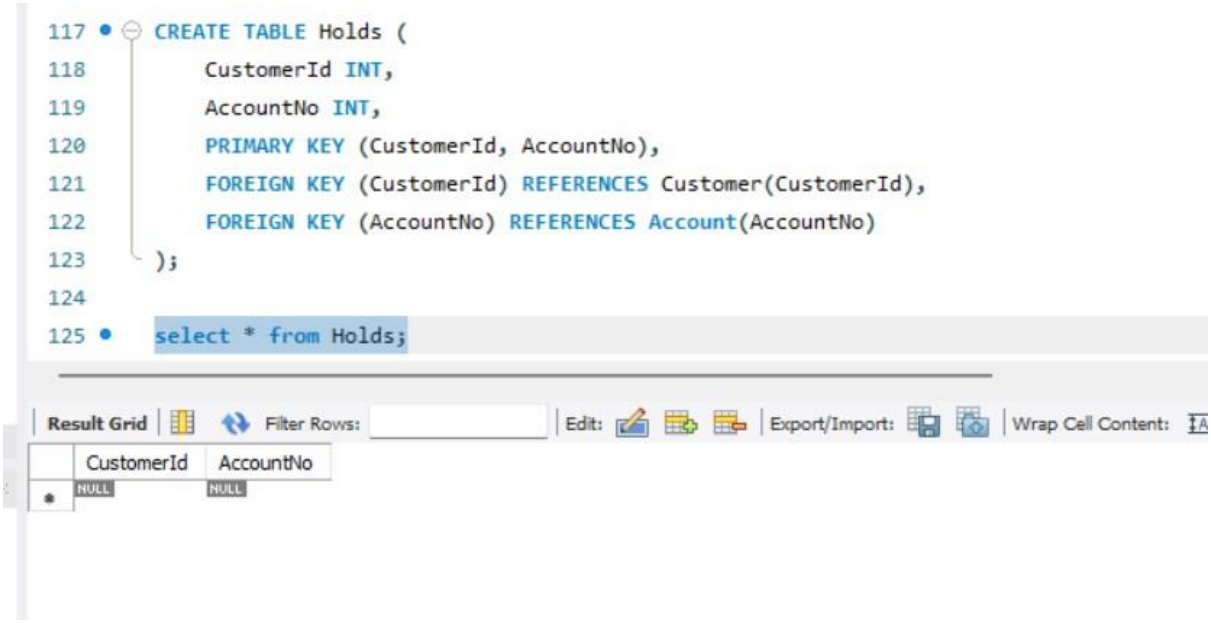


- select * from Loan;

• Holds table

```
CREATE TABLE Holds (
 CustomerId INT,
    AccountNo INT,
    PRIMARY KEY (CustomerId, AccountNo),
    FOREIGN KEY (CustomerId) REFERENCES Customer(CustomerId),
    FOREIGN KEY (AccountNo) REFERENCES Account(AccountNo)
```

);



select * from Holds;

• Availedby Table

CREATE TABLE Availedby (

Customer Id INT,

Loan Id INT,

PRIMARY KEY (Customer Id, Loan Id),

FOREIGN KEY (Customer Id) REFERENCES Customer(CustomerId),

FOREIGN KEY (Loan Id)

REFERENCES Loan(Loan Id)

);

select * from availed by;

```
126
127 • CREATE TABLE AvailedBy (
128       CustomerId INT,
129       LoanId INT,
130       PRIMARY KEY (CustomerId, LoanId),
131       FOREIGN KEY (CustomerId) REFERENCES Customer(CustomerId),
132       FOREIGN KEY (LoanId) REFERENCES Loan(LoanId)
133   );
134 • select * from availedBy;
```

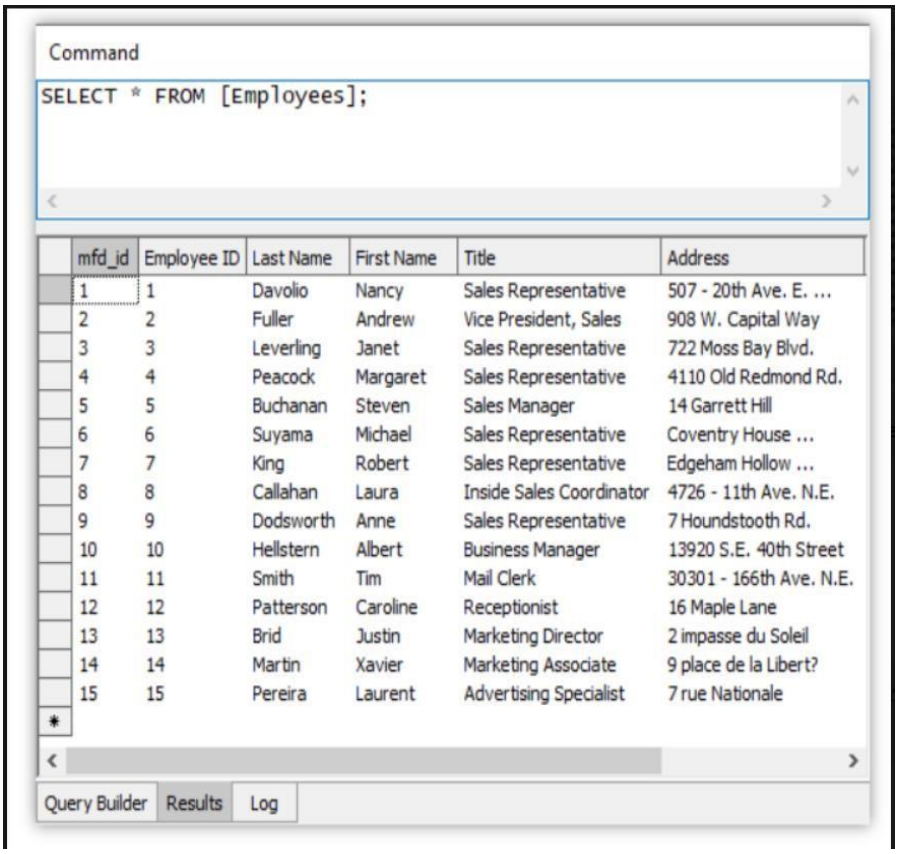
Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

CustomerId	LoanId
NULL	NULL

✞ 2.Creation Of Table

create database Employees; use

Employees;



mfd_id	Employee ID	Last Name	First Name	Title	Address
1	1	Davolio	Nancy	Sales Representative	507 - 20th Ave. E. ...
2	2	Fuller	Andrew	Vice President, Sales	908 W. Capital Way
3	3	Leverling	Janet	Sales Representative	722 Moss Bay Blvd.
4	4	Peacock	Margaret	Sales Representative	4110 Old Redmond Rd.
5	5	Buchanan	Steven	Sales Manager	14 Garrett Hill
6	6	Suyama	Michael	Sales Representative	Coventry House ...
7	7	King	Robert	Sales Representative	Edgeham Hollow ...
8	8	Callahan	Laura	Inside Sales Coordinator	4726 - 11th Ave. N.E.
9	9	Dodsworth	Anne	Sales Representative	7 Houndstooth Rd.
10	10	Hellstern	Albert	Business Manager	13920 S.E. 40th Street
11	11	Smith	Tim	Mail Clerk	30301 - 166th Ave. N.E.
12	12	Patterson	Caroline	Receptionist	16 Maple Lane
13	13	Brid	Justin	Marketing Director	2 impasse du Soleil
14	14	Martin	Xavier	Marketing Associate	9 place de la Libert?
15	15	Pereira	Laurent	Advertising Specialist	7 rue Nationale

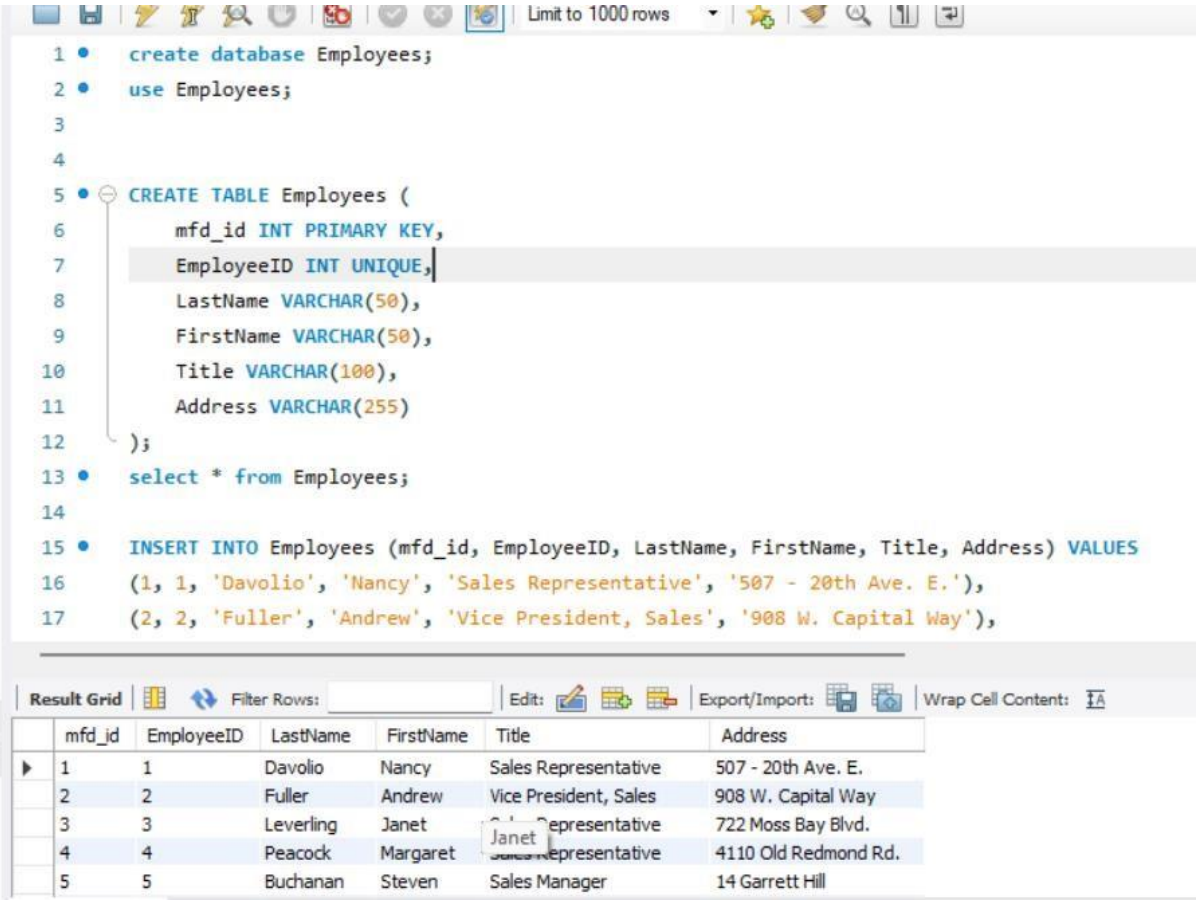
CREATE TABLE Employees (

Mfd _ id INT PRIMARY KEY,

Employee ID INT UNIQUE,

```
    LastName VARCHAR(50),
    FirstName VARCHAR(50),
    Title VARCHAR(100),
    Address VARCHAR(255)
);

select * from Employees;
```



Insert The Values Into Table

```
INSERT INTO Employees (mfd_id, EmployeeID, LastName, FirstName, Title, Address)
VALUES

(1, 1, 'Davolio', 'Nancy', 'Sales Representative', '507 - 20th Ave. E.'),
```

(2, 2, 'Fuller', 'Andrew', 'Vice President, Sales', '908 W. Capital Way'),

(3, 3, 'Leverling', 'Janet', 'Sales Representative', '722 Moss Bay Blvd.'),

(4, 4, 'Peacock', 'Margaret', 'Sales Representative', '4110 Old Redmond Rd.'),

(5, 5, 'Buchanan', 'Steven', 'Sales Manager', '14 Garrett Hill'),

(6, 6, 'Suyama', 'Michael', 'Sales Representative', 'Coventry House'),

(7, 7, 'King', 'Robert', 'Sales Representative', 'Edgeham Hollow'),

(8, 8, 'Callahan', 'Laura', 'Inside Sales Coordinator', '4726 - 11th Ave. N.E.'),

(9, 9, 'Dodsworth', 'Anne', 'Sales Representative', '7 Houndstooth Rd.'),

(10, 10, 'Hellstern', 'Albert', 'Business Manager', '13920 S.E. 40th Street'),

(11, 11, 'Smith', 'Tim', 'Mail Clerk', '30301 - 166th Ave. N.E.'),

(12, 12, 'Patterson', 'Caroline', 'Receptionist', '16 Maple Lane'),

(13, 13, 'Brid', 'Justin', 'Marketing Director', '2 impasse du Soleil'),

(14, 14, 'Martin', 'Xavier', 'Marketing Associate', '9 place de la Liberté'),

(15, 15, 'Pereira', 'Laurent', 'Advertising Specialist', '7 rue Nationale');

Queries

1.display the names of all employees select

* from Employees;

2.display the name Employee ID, last name of all employees select

LastName, Employee ID from Employees;

3.display the titles and address of all the employees select

Title, Address from employees;

```
(11, 11, 'Smith', 'Tim', 'Mail Clerk', '30301 - 166th Ave. N.E.'),
(12, 12, 'Patterson', 'Caroline', 'Receptionist', '16 Maple Lane'),
(13, 13, 'Brid', 'Justin', 'Marketing Director', '2 impasse du Soleil'),
(14, 14, 'Martin', 'Xavier', 'Marketing Associate', '9 place de la Liberté'),
(15, 15, 'Pereira', 'Laurent', 'Advertising Specialist', '7 rue Nationale');


#display the names of all employees
select * from Employees;


#display the name EmployeeID, last name of all employees
select LastName,EmployeeID from Employees;


#display te titles and adresses of all the employees
select Title,Address from employees;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Title	Address
Sales Representative	507 - 20th Ave. E.
Vice President, Sales	908 W. Capital Way
Sales Representative	722 Moss Bay Blvd.
Sales Representative	4110 Old Redmond Rd.
Sales Manager	14 Garrett Hill

employees 6

#Find employees with "Manager" in their title

SELECT * FROM Employees WHERE Title LIKE '%Manager%';

```
#Find employees with "Manager" in their title
SELECT * FROM Employees WHERE Title LIKE '%Manager%';
```

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

mfd_id	EmployeeID	LastName	FirstName	Title	Address
5	5	Buchanan	Steven	Sales Manager	14 Garrett Hill
10	10	Hellstern	Albert	Business Manager	13920 S.E. 40th Street
NULL	NULL	NULL	NULL	NULL	NULL

#Retrieve the first 5 employees (using LIMIT)

SELECT * FROM Employees LIMIT 5;

```
#Retrieve the first 5 employees (using LIMIT)
SELECT * FROM Employees LIMIT 5;
```

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

mfd_id	EmployeeID	LastName	FirstName	Title	Address
1	1	Davolio	Nancy	Sales Representative	507 - 20th Ave. E.
2	2	Fuller	Andrew	Vice President, Sales	908 W. Capital Way
3	3	Leverling	Janet	Sales Representative	722 Moss Bay Blvd.
4	4	Peacock	Margaret	Sales Representative	4110 Old Redmond Rd.
5	5	Buchanan	Steven	Sales Manager	14 Garrett Hill

Employees 3

```
#Find employees whose first names start with 'A'
SELECT * FROM Employees WHERE FirstName LIKE 'A%';

#Count employees in each department (based on job titles)
SELECT Title, COUNT(*) AS EmployeeCount
FROM Employees
GROUP BY Title;

 #Find employees who live in an address containing 'Street'
 SELECT * FROM Employees WHERE Address LIKE '%Street%';

 #Display employees sorted by EmployeeID in descending order
 SELECT * FROM Employees ORDER BY EmployeeID DESC;

  #Find employees with EmployeeID between 5 and 10
  SELECT * FROM Employees WHERE EmployeeID BETWEEN 5 AND 10;

#Count how many Sales Representatives exist
SELECT COUNT(*) AS SalesRepCount
FROM Employees
WHERE Title = 'Sales Representative';

#Retrieve unique job titles
SELECT DISTINCT Title FROM Employees;

#Find employees whose last names have exactly 6 characters
```

SELECT * FROM Employees WHERE LastName LIKE '_____';

Trainer : Mr.Kanagaraj

Presented by : Pooja Channavar