Week 9 Session3- Lab

Question:-

Create a Database & Table Using MySQL Command-Line Client.
● Create a database with the name StudentManagementSystem.
Create a table with named Student with attributes:
● StudentID (Primary Key)
● FirstName
● LastName
● DateOfBirth
● Gender
● Email
● Phone
Create a table with name Course with attributes:
● CourseID (Primary Key)
● CourseTitle
● Credits
Create a table with named Instructor with attributes:
● InstructorID (Primary Key)
● FirstName
● LastName
● Email
Create a table with named Enrollment with attributes:
● EnrollmentID (Primary Key)
● EnrollmentDate
● StudentID(Foreign key)
● CourseID(Foreign Key)
● InstructorID(Foreign key)
Create a table with named Score with attributes:
● ScoreID (Primary Key)
● CourseID (Foreign key)
● StudentID (Foreign Key)
● DateOfExam
● CreditObtained
Create a table with named Feedback with attributes:
● FeedbackID (Primary Key)
● StudentID (Foreign key)
● Date
● InstructorName

● Feedback

Assignment 1.
For this assignment, please use the same tables created in your previous lab session.
Task 1:
Update the Student table with the following information:
Change the email to 'jane_Smith@example.com'
Where FirstName is 'Jane' and LastName is 'Smith';

Update the Instructor with the following information:
Change the email to 'sunilrawat@example.com'
Where FirstName of the instructor is 'Sunil' and LastName is 'Rawat';
Task 2:
Delete record from the Student table on following condition:
Delete student/students records from the Student table where last name is Smith.
Task 3:
List the student whose first name starts with J.
Submission: Create an SQL script file containing your solutions for all tasks (queries).

Name the file "lab_assignment1.sql" Provide comments above each query to
indicate the task number and the query's purpose.

Assignment 2.

Database Schema:
Consider a simple database with one tables: Employee
Employee Table:
● Columns: emp_id (Primary Key), first_name, last_name, age, email
Task 1:
Insert Data
Write an SQL INSERT statement to insert data into the Employee table.
Task 2:

Retrieving Data
Write an SQL SELECT statement to retrieve the first_name and last_name of all
employees from the Employee table.

Task 3:

Filtering Data
Write an SQL SELECT statement to retrieve the first_name, last_name, and age of
employees who are older than 30 years.

Task 4:

Updating Data
Write an SQL UPDATE statement to increase the age of employees by 1 year for all
employees older than 25.

Submission:
Create an SQL script file containing your solutions for all tasks (queries). Name the file
"lab_assignment2.sql" Provide comments above each query to indicate the task
number and the query's purpose.

Assignment 3.

Database Schema:
Consider a simple database with one tables: BankAccount
BankAccount Table:
● Columns: account_id (Primary Key), account_holder_name, account_balance

Task 1:

Insert Data
Write an SQL INSERT statement to insert data into the BankAccount table.

Task 2:

Retrieving Data
Write an SQL SELECT statement to retrieve the account_holder_name and
account_balance of all account holders from the BankAccount table.

Task 3:

Filtering Data

Write an SQL SELECT statement to retrieve the
account_holder_name and
account_balance where the account_balance is more than 30,000.

Task 4:

Updating Data
Write an SQL UPDATE statement to change the
account_balance of the account holder
whose ID is 103 to 50,000.

Submission:
Create an SQL script file containing your solutions for all tasks (queries). Name the file
"lab_assignment3.sql" Provide comments above each query to indicate the task
number and the query's purpose.

Answers:-

Assignment 1.

```
create database lab_assignment1;

use lab_assignment1;

CREATE TABLE Student (
StudentID VARCHAR(10) PRIMARY KEY,
FirstName VARCHAR(25),
LastName VARCHAR(25),
DateOfBirth DateTime,
Gender VARCHAR(25),
Email VARCHAR(30) UNIQUE,
Phone VARCHAR(25)
);

CREATE TABLE Instructor (
    InstructorID VARCHAR(10) PRIMARY KEY,
    Email VARCHAR(30) UNIQUE,
    FirstName VARCHAR(30),
    LastName VARCHAR(30)
```

```
);

INSERT INTO Student
(StudentID,FirstName,LastName,DateOfBirth,Gender,
Email,Phone) VALUES
('S101','John', 'Doe','2000-10-10','M',
'john@example.com','9878457945'),
('S102','Jane', 'Smith','2013-08-08','M',
'jane@example.com','9977457745'),
('S103','Alice', 'Johnson','2011-09-08','F',
'alice@example.com','9876457845'),
('S104','Anna', 'Doe','2011-07-08','F',
'Anna.doe@india.com','9876457842'),
('S105','Peter', 'Parker','2011-06-05','M',
'p_parker@example.com','9276457843');
```

Task 1:

```
SELECT * FROM Student;
```

StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone
S101	John	Doe	2000-10-10 00:00:00	M	john@example.com	9878457945
S102	Jane	Smith	2013-08-08 00:00:00	M	jane@example.com	9977457745
S103	Alice	Johnson	2011-09-08 00:00:00	F	alice@example.com	9876457845
S104	Anna	Doe	2011-07-08 00:00:00	F	Anna.doe@india.com	9876457842
S105	Peter	Parker	2011-06-05 00:00:00	M	p_parker@example.com	9276457843
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
UPDATE Student
SET Email = 'jane_Smith@example.com'
WHERE StudentID = 'S102';

SELECT * FROM Student;
```

StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone
S101	John	Doe	2000-10-10 00:00:00	M	john@example.com	9878457945
S102	Jane	Smith	2013-08-08 00:00:00	M	jane_Smith@example.com	9977457745
S103	Alice	Johnson	2011-09-08 00:00:00	F	alice@example.com	9876457845
S104	Anna	Doe	2011-07-08 00:00:00	F	Anna.doe@india.com	9876457842
S105	Peter	Parker	2011-06-05 00:00:00	M	p_parker@example.com	9276457843
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
SELECT * FROM Instructor;
```

InstructorID	Email	FirstName	LastName
I101	sunil@example.com	Sunil	Rawat
I102	nida@example.com	Nida	Fatima
I103	shiv@example.com	Shiv	Kumar
NULL	NULL	NULL	NULL

```
UPDATE Instructor
SET Email = 'sunilrawat@example.com'
WHERE InstructorID = 'I101';

SELECT * FROM Instructor;
```

InstructorID	Email	FirstName	LastName
I101	sunilrawat@example.com	Sunil	Rawat
I102	nida@example.com	Nida	Fatima
I103	shiv@example.com	Shiv	Kumar
NULL	NULL	NULL	NULL

Task 2:

```
SELECT * FROM Student;
```

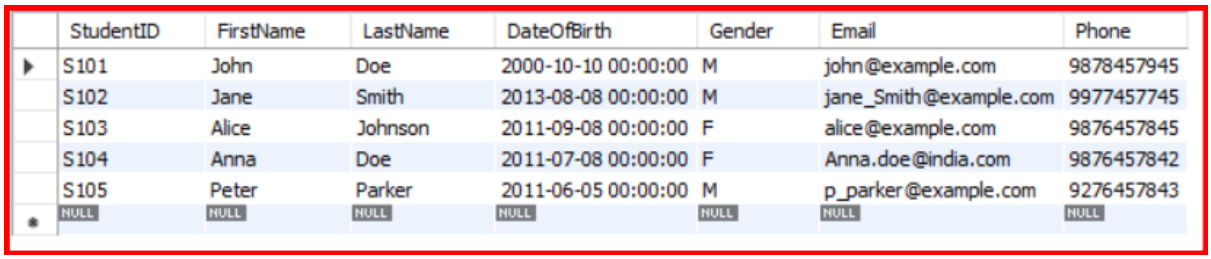
StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone
S101	John	Doe	2000-10-10 00:00:00	M	john@example.com	9878457945
S102	Jane	Smith	2013-08-08 00:00:00	M	jane_Smith@example.com	9977457745
S103	Alice	Johnson	2011-09-08 00:00:00	F	alice@example.com	9876457845
S104	Anna	Doe	2011-07-08 00:00:00	F	Anna.doe@india.com	9876457842
S105	Peter	Parker	2011-06-05 00:00:00	M	p_parker@example.com	9276457843
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
DELETE from student
WHERE StudentID = 'S102';
SELECT * FROM Student;
```

StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone
S101	John	Doe	2000-10-10 00:00:00	M	john@example.com	9878457945
S103	Alice	Johnson	2011-09-08 00:00:00	F	alice@example.com	9876457845
S104	Anna	Doe	2011-07-08 00:00:00	F	Anna.doe@india.com	9876457842
S105	Peter	Parker	2011-06-05 00:00:00	M	p_parker@example.com	9276457843
NULL	NULL	NULL	NULL	NULL	NULL	NULL

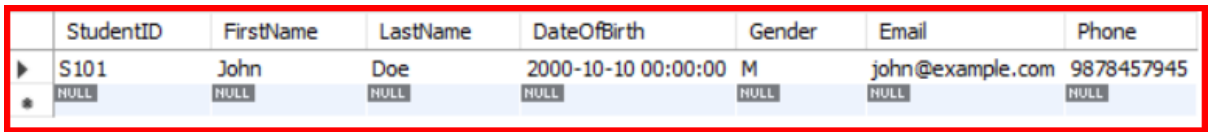
Task 3:

SELECT * FROM Student;



StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone
S101	John	Doe	2000-10-10 00:00:00	M	john@example.com	9878457945
S102	Jane	Smith	2013-08-08 00:00:00	M	jane_Smith@example.com	9977457745
S103	Alice	Johnson	2011-09-08 00:00:00	F	alice@example.com	9876457845
S104	Anna	Doe	2011-07-08 00:00:00	F	Anna.doe@india.com	9876457842
S105	Peter	Parker	2011-06-05 00:00:00	M	p_parker@example.com	9276457843
NULL	NULL	NULL	NULL	NULL	NULL	NULL

SELECT * FROM Student
WHERE FirstName LIKE 'J%';



StudentID	FirstName	LastName	DateOfBirth	Gender	Email	Phone
S101	John	Doe	2000-10-10 00:00:00	M	john@example.com	9878457945
NULL	NULL	NULL	NULL	NULL	NULL	NULL

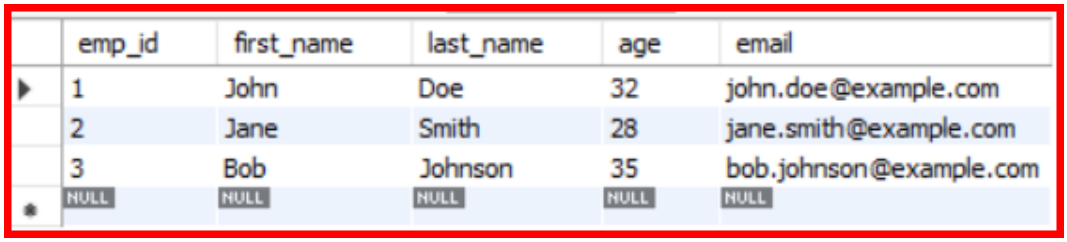
Assignment 2.

CREATE TABLE Employee (
emp_id VARCHAR(10) PRIMARY KEY,
first_name VARCHAR(25),
last_name VARCHAR(25),
age int(2),
email VARCHAR(30) UNIQUE
);

Task 1:

INSERT INTO Employee (emp_id, first_name, last_name, age, email)
VALUES
(1, 'John', 'Doe', 32, 'john.doe@example.com'),
(2, 'Jane', 'Smith', 28, 'jane.smith@example.com'),
(3, 'Bob', 'Johnson', 35, 'bob.johnson@example.com');

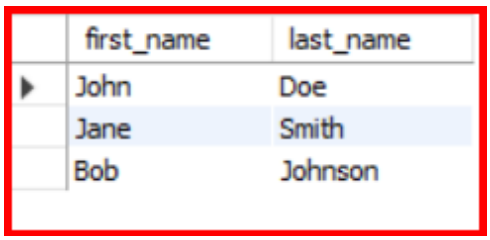
select * from Employee;



emp_id	first_name	last_name	age	email
1	John	Doe	32	john.doe@example.com
2	Jane	Smith	28	jane.smith@example.com
3	Bob	Johnson	35	bob.johnson@example.com
NULL	NULL	NULL	NULL	NULL

Task 2:

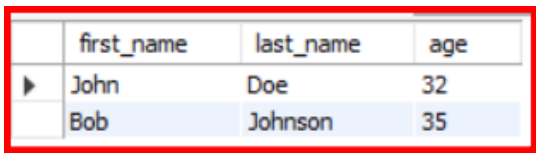
SELECT first_name, last_name FROM Employee;



first_name	last_name
John	Doe
Jane	Smith
Bob	Johnson

Task 3:

SELECT first_name, last_name, age FROM Employee
WHERE age > 30;



first_name	last_name	age
John	Doe	32
Bob	Johnson	35

Task 4:

Assignment 3.

```
CREATE TABLE BankAccount (
account_id VARCHAR(10) PRIMARY KEY,
account_holder_name VARCHAR(30),
account_balance int
);
```

Task 1:

```
INSERT INTO BankAccount (account_id, account_holder_name,
account_balance)
VALUES
(101, 'John Doe', 50000),
(102, 'Jane Smith', 35000),
(103, 'Bob Johnson', 45000);

select * from BankAccount;
```

account_id	account_holder_name	account_balance
101	John Doe	50000
102	Jane Smith	35000
103	Bob Johnson	45000
NULL	NULL	NULL

Task 2:

```
SELECT account_holder_name, account_balance FROM
BankAccount;
```

account_holder_name	account_balance
John Doe	50000
Jane Smith	35000
Bob Johnson	45000

Task 3:

```
SELECT account_holder_name, account_balance FROM
BankAccount
WHERE account_balance > 30000;
```

account_holder_name	account_balance
John Doe	50000
Jane Smith	35000
Bob Johnson	45000

Task 4: