SQL:-

>Insert:

Syntax: INSERT TABLE ‘schema’.’table\_name’ (colum\_name1, column\_name2......) VALUES (value1,value2.....);

>Alter:

Syntax: To add column:

ALTER TABLE schema.table\_name ADD column\_name data\_type;

To modify column:

ALTER TABLE schema.table\_name CHANGE COLUMN ‘column\_name1’ ‘column\_name2’ data\_type;

>Filter Results with Where Statement:

Syntax: SELECT column1, column2, ... FROM table\_name WHERE condition;

>Delete values in table:

Syntax: DELETE FROM ‘schema’.’table\_name’ where (condition);

>ORDER BY: BY: This Clause is used to sort the records in ascending or descending order.

>GROUP BY: This Clause is used to collect data from multiple records and group the result by one or more column.

>INNER JOIN: Returns dataset that have matching values in both tables

>LEFT JOIN: Returns all records from the left table and matched records from the right table.

>RIGHT JOIN: Returns all records from the right table and matched records from the left table.

>CROSS/CARTESIAN JOIN: Cartesian product of all associated tables. The Cartesian product can be explained as all rows present in the first table multiplied by all rows present in the second table.

CODE 1:

CREATE DATABASE db3;

USE db3;

SHOW TABLES;

CREATE TABLE Student

( Student\_ID VARCHAR(10),

Student\_Name VARCHAR(20),

Address VARCHAR(20),

DOB DATE,

Department\_ID VARCHAR(20));

/\*Inserting Values in Table Student\*/

INSERT INTO Student VALUES('01','Luk','north,Delhi','1999-12-31','DOO1');

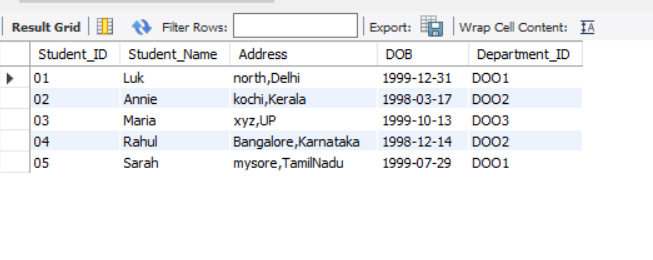
INSERT INTO Student VALUES('02','Annie','kochi,Kerala','1998-03-17','DOO2');

INSERT INTO Student VALUES('03','Maria','xyz,UP','1999-10-13','DOO3');

INSERT INTO Student VALUES('04','Rahul','Bangalore,Karnataka','1998-12-14','DOO2');

INSERT INTO Student VALUES('05','Sarah','mysore,TamilNadu','1999-7-29','DOO1');

SELECT \* FROM Student;



CREATE TABLE Subjects

( Subject\_ID VARCHAR(10),

Subject\_Name VARCHAR(20),

Lecturer\_ID VARCHAR(20));

/\*Inserting Values in Table Subjects\*/

INSERT INTO Subjects VALUES('S01','Hindi','L1');

INSERT INTO Subjects VALUES('S01','English','L2');

INSERT INTO Subjects VALUES('S01','Arabi','L3');

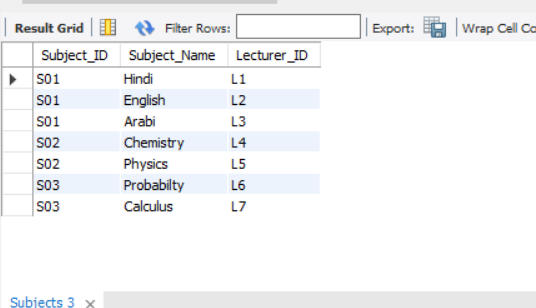
INSERT INTO Subjects VALUES('S02','Chemistry','L4');

INSERT INTO Subjects VALUES('S02','Physics','L5');

INSERT INTO Subjects VALUES('S03','Probabilty','L6');

INSERT INTO Subjects VALUES('S03','Calculus','L7');

SELECT \* FROM Subjects;



CREATE TABLE Lecturers (

Lecturer\_ID VARCHAR(10),

Lecturer\_Name VARCHAR(20),

Department\_ID VARCHAR(20));

INSERT INTO Lecturers VALUES('L1','Maya','DOO1');

INSERT INTO Lecturers VALUES('L2','David','DOO1');

INSERT INTO Lecturers VALUES('L3','Rohit','DOO2');

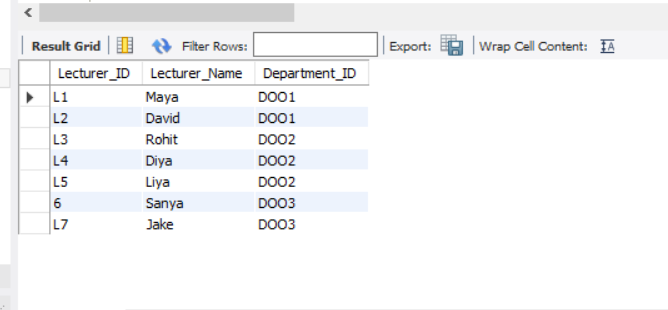
INSERT INTO Lecturers VALUES('L4','Diya','DOO2');

INSERT INTO Lecturers VALUES('L5','Liya','DOO2');

INSERT INTO Lecturers VALUES('6','Sanya','DOO3');

INSERT INTO Lecturers VALUES('L7','Jake','DOO3');

SELECT \* FROM Lecturers;



CREATE TABLE Departments (

Department\_ID VARCHAR(10),

Department\_Name VARCHAR(20));

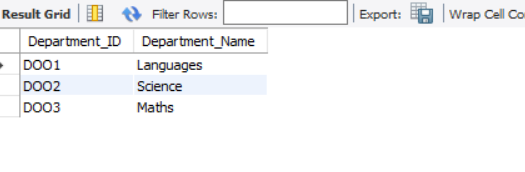
INSERT INTO Departments VALUES('DOO1','Languages');

INSERT INTO Departments VALUES('DOO2','Science');

INSERT INTO Departments VALUES('DOO3','Maths');

/\*Displaying Contents in Table Departments\*/

SELECT \* FROM Departments;



/\*Creating Table FeeStructure\*/

CREATE TABLE FeeStructure (

Student\_ID VARCHAR(10),

Fee INTEGER);

/\*Inserting Values in Table FeeStructures\*/

INSERT INTO FeeStructure VALUES('O1',25000);

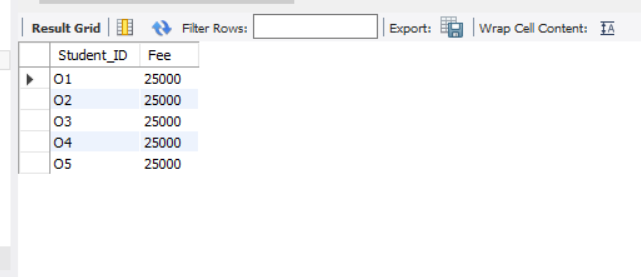
INSERT INTO FeeStructure VALUES('O2',25000);

INSERT INTO FeeStructure VALUES('O3',25000);

INSERT INTO FeeStructure VALUES('O4',25000);

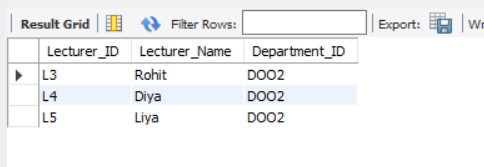
INSERT INTO FeeStructure VALUES('O5',25000);

SELECT \* FROM FeeStructure;



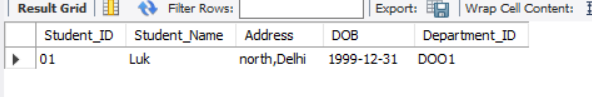
/\*Using WHERE\*/

SELECT \* FROM Lecturers WHERE Department\_ID = 'DOO2';



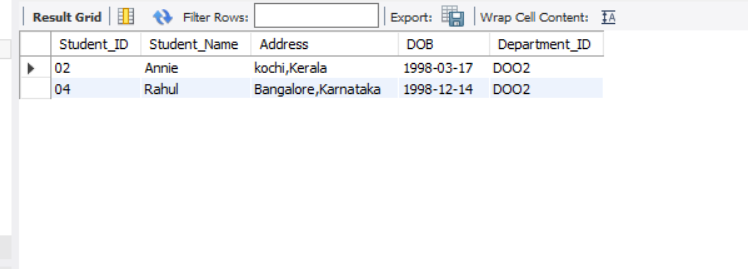
/\*Using LIKE\*/

SELECT \* FROM Student WHERE Address LIKE '%,Delhi%';



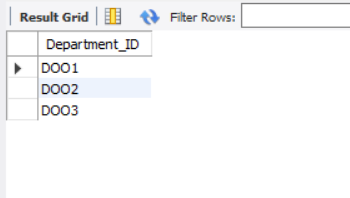
/\*Using BETWEEN\*/

SELECT \* FROM Student WHERE DOB BETWEEN '1998-01-01' AND '1998-12-31';



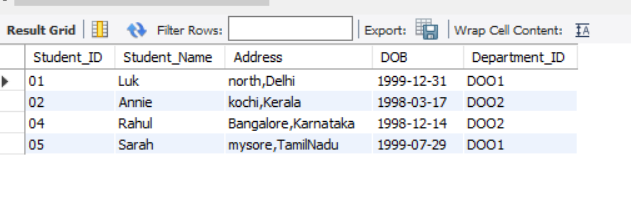
/\*Using DISTINCT\*/

SELECT DISTINCT Department\_ID FROM Lecturers;



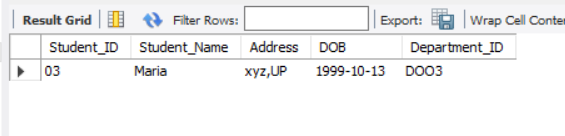
/\*Using IN\*/

SELECT \* FROM Student WHERE Department\_ID IN ('DOO1','DOO2');



/\*Using Having\*/

SELECT \* FROM Student GROUP BY Department\_ID HAVING COUNT(Department\_ID) <=1;



/\*Using ALTER-ADD\*/

ALTER TABLE Student ADD Email VARCHAR(20);

/\*Using ALTER-DROP\*/

ALTER TABLE Student DROP Email;

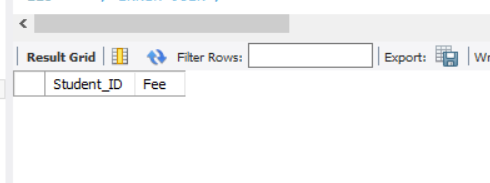
/\*Using ALTER-MODIFY\*/

ALTER TABLE Student MODIFY Department\_ID VARCHAR(5);

/\*Using Truncate\*/

TRUNCATE TABLE FeeStructure;

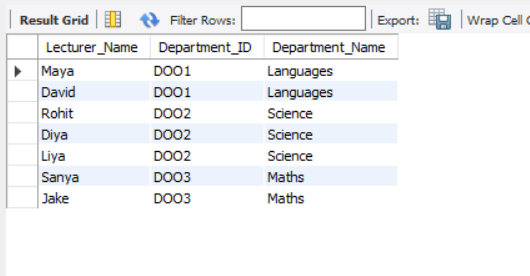
SELECT \* FROM FeeStructure;



/\*Joins\*/

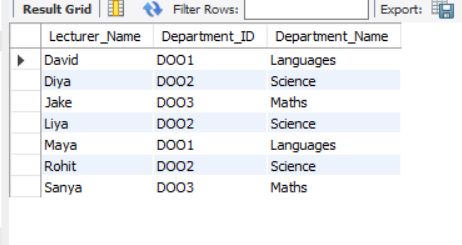
/\*INNER JOIN\*/

SELECT Lecturers.Lecturer\_Name,Lecturers.Department\_ID,Departments.Department\_Name FROM Lecturers INNER JOIN Departments ON Lecturers.Department\_ID=Departments.Department\_ID;



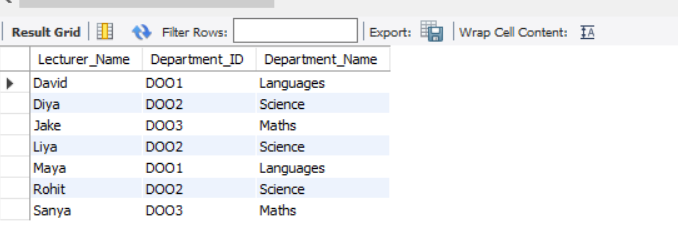
/\*LEFT JOIN\*/

SELECT Lecturers.Lecturer\_Name,Lecturers.Department\_ID,Departments.Department\_Name FROM Lecturers LEFT JOIN Departments ON Lecturers.Department\_ID=Departments.Department\_ID ORDER BY Lecturers.Lecturer\_Name;



/\*RIGHT JOIN\*/

SELECT Lecturers.Lecturer\_Name,Lecturers.Department\_ID,Departments.Department\_Name FROM Lecturers RIGHT JOIN Departments ON Lecturers.Department\_ID=Departments.Department\_ID ORDER BY Lecturers.Lecturer\_Name;



CODE 2:

use employeedatabase11;

show tables;

INSERT INTO `employeedatabase11`.`employee` (`Emp\_ID`, `Emp\_Name`, `Emp\_Age`, `Emp\_Dep`, `Dep\_ID`, `Emp\_Location`, `Emp\_Salary`) VALUES ('101', 'Ravi', '32', 'HR', '111', 'Bangalore', '10000');

INSERT INTO `employeedatabase11`.`employee` (`Emp\_ID`, `Emp\_Name`, `Emp\_Age`, `Emp\_Dep`, `Dep\_ID`, `Emp\_Location`, `Emp\_Salary`) VALUES ('102', 'Ishitha', '25', 'Sales', '113', 'Chennai', '15000');

INSERT INTO `employeedatabase11`.`employee` (`Emp\_ID`, `Emp\_Name`, `Emp\_Age`, `Emp\_Dep`, `Dep\_ID`, `Emp\_Location`, `Emp\_Salary`) VALUES ('103', 'Rupa', '23', 'IT', '112', 'Hyderabad', '25000');

INSERT INTO `employeedatabase11`.`employee` (`Emp\_ID`, `Emp\_Name`, `Emp\_Age`, `Emp\_Dep`, `Dep\_ID`, `Emp\_Location`, `Emp\_Salary`) VALUES ('104', 'Kiran', '27', 'Sales', '113', 'Raipur', '17500');

INSERT INTO `employeedatabase11`.`employee` (`Emp\_ID`, `Emp\_Name`, `Emp\_Age`, `Emp\_Dep`, `Dep\_ID`, `Emp\_Location`, `Emp\_Salary`) VALUES ('105', 'Swetha', '20', 'HR', '111', 'Vizag', '22750');

INSERT INTO `employeedatabase11`.`employee` (`Emp\_ID`, `Emp\_Name`, `Emp\_Age`, `Emp\_Dep`, `Dep\_ID`, `Emp\_Location`, `Emp\_Salary`) VALUES ('106', 'Pooja', '21', 'HR', '111', 'UP', '22000');

show tables;

select\*from employee;

select Emp\_Name,Emp\_Age from employeedatabase11.employee where Emp\_location='Raipur';

SELECT \* FROM employeedatabase11.department;

DELETE FROM `employeedatabase11`.`department` WHERE (`Dep\_No` = '117');

show tables;

select\*from department;

select avg(Emp\_Salary)AS Avg\_Salary,Emp\_Location from employeedatabase11.employee group by Emp\_Location having Avg\_Salary>18000 order by avg(avgEmp\_Salary)desc;

select employee.Emp\_Name,employee.Dep\_ID,department.Dep\_Name,department.Dep\_Location

from employeedatabase11.employee

inner join employeedatabase11.department

on employee.Dep\_ID=department.Dep\_No;

select employee.Emp\_Name,employee.Emp\_Location,dependant.Dependent\_Name,dependant.Dependant\_Location

from employeedatabase11.employee

left join employeedatabase11.dependant

on employee.Emp\_ID=dependent.E\_ID;

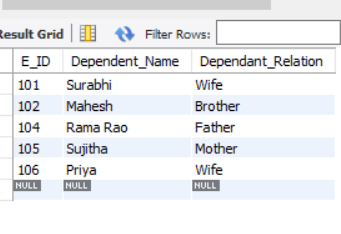
select employee.Emp\_Name,employee.Dep\_ID,department.Dep\_Location,department.Dep\_Name

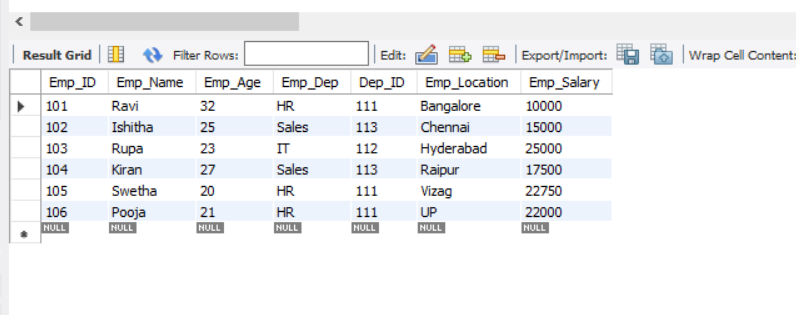
from employeedatabase11.employee

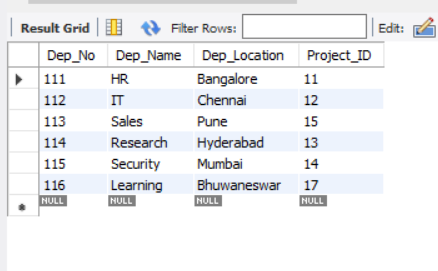
right join employeedatabase11.department

on employee.Dep\_ID=department.Dep\_No;

select\*from employeedatabase11.department CROSS JOIN employeedatabase11 where Emp\_Salary>17000







CODE 3:

create database db2;

use db2;

CREATE TABLE STATION(ID INTEGER PRIMARY KEY,CITY CHAR(20),STATE CHAR(2));

SHOW TABLES;

INSERT INTO STATION VALUES(13,'AGRA','AZ');

INSERT INTO STATION VALUES(23,'GOA','BZ');

SELECT\*FROM STATION

