**Create 3 tables named students,department,year**

# student should contain relationship to both department and yearmysql> create database cricket;

Query OK, 1 row affected (0.01 sec)

mysql> use cricket;

Database changed

# #creaating department table

mysql> -- Create the department table mysql> CREATE TABLE department (

-> deptd INT PRIMARY KEY AUTO\_INCREMENT,

-> deptname VARCHAR(50) NOT NULL

-> );

Query OK, 0 rows affected (0.01 sec) #**creating year table**

mysql> mysql> -- Create the year table mysql> CREATE TABLE year (

-> yearid INT PRIMARY KEY AUTO\_INCREMENT,

-> yearname VARCHAR(20) NOT NULL

-> );

Query OK, 0 rows affected (0.01 sec)

# #creating student table and adding dept id and year id as foreign key

mysql> mysql> -- Create the students table with foreign key relationships mysql> CREATE TABLE students (

-> studentid INT PRIMARY KEY AUTO\_INCREMENT,

-> studentname VARCHAR(100) NOT NULL,

-> deptid INT,

-> yearid INT,

-> FOREIGN KEY (deptid) REFERENCES department(deptid),

-> FOREIGN KEY (yearid) REFERENCES year(yearid)

-> );

Query OK, 0 rows affected (0.03 sec)

# mysql> desc department;

+-----------+-------------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+-----------+-------------+------+-----+---------+----------------+

| deptid | int | NO | PRI | NULL | auto\_increment |

| deptname | varchar(50) | NO | | NULL | |

+-----------+-------------+------+-----+---------+----------------+

2 rows in set (0.00 sec)

# mysql> desc year;

+-----------+-------------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+-----------+-------------+------+-----+---------+----------------+

| yearid | int | NO | PRI | NULL | auto\_increment |

| yearname | varchar(20) | NO | | NULL | |

+-----------+-------------+------+-----+---------+----------------+

2 rows in set (0.00 sec)

# mysql> desc student;

mysql> desc students;

+--------------+--------------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+--------------+--------------+------+-----+---------+----------------+

| studentid | int | NO | PRI | NULL | auto\_increment |

| studentname | varchar(100) | NO | | NULL | |

| deptid | int | YES | MUL | NULL | |

| yearid | int | YES | MUL | NULL | |

+--------------+--------------+------+-----+---------+----------------+

4 rows in set (0.00 sec)

# store 5 students for each department

**#inserting values into department table** mysql> INSERT INTO department (deptname) VALUES

-> ('CSE'),

-> ('ECE'),

-> ('EEE'),

-> ('CD'),

-> ('Civil');

Query OK, 5 rows affected (0.01 sec) Records: 5 Duplicates: 0 Warnings: 0

# #Displaying values of Department table

mysql> select \* from department;

+---------+-----------+

| dept\_id | dept\_name |

+---------+-----------+

| 1 | CSE |

| 2 | ECE |

| 3 | EEE |

| 4 | DS |

| 5 | Civil |

+---------+-----------+

5 rows in set (0.00 sec)

**#inserting values into year table** mysql> INSERT INTO year (yearname) VALUES

-> ('Year 1'),

-> ('Year 2'),

-> ('Year 3'),

-> ('Year 4');

Query OK, 4 rows affected (0.00 sec) Records: 4 Duplicates: 0 Warnings: 0 #**Displaying values of year table**

mysql> select \* from year;

+---------+-----------+

| year\_id | year\_name |

+---------+-----------+

| 1 | Year 1 |

| 2 | Year 2 |

| 3 | Year 3 |

| 4 | Year 4 |

+---------+-----------+

4 rows in set (0.00 sec)

# #inserting values into student table

mysql> INSERT INTO students (student\_name, dept\_id, year\_id) VALUES

-> ('Student 1 - CSE', 1, 1), ('Student 2 - CSE', 1, 2), ('Student 3 - CSE', 1, 3), ('Student 4 - CSE', 1, 4),

-> ('Student 1 - ECE', 2, 1), ('Student 2 - ECE', 2, 2), ('Student 3 - ECE', 2, 3), ('Student 4 - ECE', 2, 4),

-> ('Student 1 - EE', 3, 1), ('Student 2 - EE', 3, 2), ('Student 3 - EE', 3, 3), ('Student 4 - EE', 3, 4),

-> ('Student 1 - ME', 4, 1), ('Student 2 - ME', 4, 2), ('Student 3 - ME', 4, 3), ('Student 4 - ME', 4, 4),

-> ('Student 1 - Civil', 5, 1), ('Student 2 - Civil', 5, 2), ('Student 3 - Civil', 5, 3), ('Student 4 - Civil', 5,

4);

Query OK, 20 rows affected (0.00 sec) Records: 20 Duplicates: 0 Warnings: 0

# #Displaying values of student table

mysql> select \* from students;

+------------+-------------------+---------+---------+

| studentid | studentname | deptid | yearid |

+------------+-------------------+---------+---------+

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| | | 1 | Student 1 - CSE | | | 1 | | | 1 | | |
| | | 2 | Student 2 - CSE | | | 1 | | | 2 | | |
| | | 3 | Student 3 - CSE | | | 1 | | | 3 | | |
| | | 4 | Student 4 - CSE | | | 1 | | | 4 | | |
| | | 5 | Student 1 - ECE | | | 2 | | | 1 | | |
| | | 6 | Student 2 - ECE | | | 2 | | | 2 | | |
| | | 7 | Student 3 - ECE | | | 2 | | | 3 | | |
| | | 8 | Student 4 - ECE | | | 2 | | | 4 | | |
| | | 9 | Student 1 - EEE | | | 3 | | | 1 | | |
| | | 10 | Student 2 - EE | | | 3 | | | 2 | | |
| | | 11 | Student 3 - EEE | | | | 3 | | | 3 | | |
| | | 12 | Student 4 - EEE | | | | 3 | | | 4 | | |
| | | 13 | Student 1 - CD | | | | 4 | | | 1 | | |
| | | 14 | Student 2 - CD | | | | 4 | | | 2 | | |
| | | 15 | Student 3 - CD | | | | 4 | | | 3 | | |
| | | 16 | Student 4 - CD | | | | 4 | | | 4 | | |
| | | 17 | Student 1 - Civil | | | | 5 | | | 1 | | |
| | | 18 | Student 2 - Civil | | | | 5 | | | 2 | | |
| | | 19 | Student 3 - Civil | | | | 5 | | | 3 | | |
| | | 20 | Student 4 - Civil | | | | 5 | | | 4 | | |

+------------+-------------------+---------+---------+

20 rows in set (0.00 sec)

# write a query to display students from CSE department

mysql> SELECT students.studentid, students.studentname, department.deptname

-> FROM students

-> JOIN department ON students.deptid = department.deptid

-> WHERE department.deptname = 'CSE';

+------------+-----------------+-----------+

| studentid | studentname | deptname |

+------------+-----------------+-----------+

| 1 | Student 1 - CSE | CSE |

| 2 | Student 2 - CSE | CSE |

| 3 | Student 3 - CSE | CSE |

| 4 | Student 4 - CSE | CSE |

+------------+-----------------+-----------+

4 rows in set (0.01 sec)

# write a query to display only deptname using student table

mysql> SELECT DISTINCT department.deptname

-> FROM students

-> JOIN department ON students.deptid = department.deptid;

+-----------+

| deptname |

+-----------+

| CSE |

| ECE |

| EEE |

| CD |

| Civil |

+-----------+

5 rows in set (0.00 sec)

# write a query to display students sorted by dept and firstname

mysql> SELECT students.studentid, students.studentname, department.deptname

-> FROM students

-> JOIN department ON students.deptid = department.deptid

-> ORDER BY department.deptname, students.studentname;

+------------+-------------------+-----------+

| studentid | studentname | deptname |

+------------+-------------------+-----------+

| 17 | Student 1 - Civil | Civil |

| 18 | Student 2 - Civil | Civil |

| 19 | Student 3 - Civil | Civil |

| 20 | Student 4 - Civil | Civil |

|  |  |  |  |
| --- | --- | --- | --- |
| | | 1 | Student 1 - CSE | | CSE | | |
| | | 2 | Student 2 - CSE | | CSE | | |
| | | 3 | Student 3 - CSE | | CSE | | |
| | | 4 | Student 4 - CSE | | CSE | | |
| | | 5 | Student 1 - ECE | | ECE | | |

| 6 | Student 2 - ECE | ECE |

| 7 | Student 3 - ECE | ECE |

| 8 | Student 4 - ECE | ECE |

| 9 | Student 1 - EEE | EEE |

|  |  |  |  |
| --- | --- | --- | --- |
| | | 10 | Student 2 - EEE | | EEE | | |
| | | 11 | Student 3 - EEE | | EEE | | |
| | | 12 | Student 4 - EEE | | EEE | | |
| | | 13 | Student 1 - CD | | CD | | |
| | | 14 | Student 2 - CD | | CD | | |
| | | 15 | Student 3 - CD | | CD | | |
| | | 16 | Student 4 - CD | | CD | | |

+------------+-------------------+-----------+

20 rows in set (0.01 sec)