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ENRL : 2020CSB092

Creating table teacher

```
mysql> CREATE TABLE teacher(  
-> Tid int PRIMARY KEY,  
-> name char(30),  
-> dept char(30));  
Query OK, 0 rows affected (0.00 sec)  
  
mysql> DESC teacher;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type      | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| Tid   | int(11)   | NO   | PRI | NULL    |       |  
| name  | char(30)  | YES  |     | NULL    |       |  
| dept  | char(30)  | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)
```

Inserting values in teacher table

```
mysql> INSERT INTO teacher VALUES(11,"anish","physics");  
Query OK, 1 row affected (0.00 sec)
```

Teacher tables after inserting values

```
mysql> SELECT * FROM teacher;  
+-----+-----+-----+  
| Tid | name  | dept  |  
+-----+-----+-----+  
| 11  | anish | physics |  
| 12  | ramesh | maths  |  
| 13  | suresh | physics |  
+-----+-----+-----+  
3 rows in set (0.00 sec)
```

Creating table subject

```
mysql> CREATE TABLE subject(  
-> subno int PRIMARY KEY,  
-> subtitle char(30));  
Query OK, 0 rows affected (0.00 sec)  
  
mysql> DESC subject;  
+-----+-----+-----+-----+-----+-----+  
| Field      | Type      | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| subno      | int(11)   | NO   | PRI | NULL    |       |  
| subtitle   | char(30)  | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)
```

Inserting values in table subject

```
mysql> INSERT INTO subject VALUES(101,"thermodynamics");  
Query OK, 1 row affected (0.00 sec)
```

Subject table after inserting values

```
mysql> SELECT * FROM subject;  
+-----+-----+  
| subno | subtitle      |  
+-----+-----+  
| 101   | thermodynamics |  
| 102   | DBMS           |  
| 103   | Algorithms     |  
+-----+-----+  
3 rows in set (0.00 sec)
```

Creating table taughtby

```
mysql> CREATE TABLE taughtby(  
-> tid int PRIMARY KEY REFERENCES teacher(tid),  
-> subno int REFERENCES subject(subno));  
Query OK, 0 rows affected (0.00 sec)  
  
mysql> DESC taughtby;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type   | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| tid   | int(11)| NO   | PRI | NULL    |      |  
| subno | int(11)| YES  |     | NULL    |      |  
+-----+-----+-----+-----+-----+-----+  
2 rows in set (0.00 sec)
```

Inserting values in taughtby

```
mysql> INSERT INTO taughtby VALUES(11,101);  
Query OK, 1 row affected (0.00 sec)
```

Taughtby table after inserting values

```
mysql> SELECT * FROM taughtby;  
+-----+-----+  
| tid | subno |  
+-----+-----+  
| 11  | 101   |  
| 12  | 103   |  
| 13  | 102   |  
+-----+-----+  
3 rows in set (0.00 sec)
```

..

Creating table student

```
mysql> CREATE TABLE student(  
-> rollno int PRIMARY KEY,  
-> sname char(30),  
-> city char(30));  
Query OK, 0 rows affected (0.01 sec)  
  
mysql> DESC student;  
+-----+-----+-----+-----+-----+-----+  
| Field | Type      | Null | Key | Default | Extra |  
+-----+-----+-----+-----+-----+-----+  
| rollno | int(11)   | NO   | PRI | NULL    |       |  
| sname  | char(30)  | YES  |     | NULL    |       |  
| city   | char(30)  | YES  |     | NULL    |       |  
+-----+-----+-----+-----+-----+-----+  
3 rows in set (0.00 sec)
```

Inserting values in table student

```
mysql> INSERT INTO student VALUES(22,"kaushtubh","kolkata");  
Query OK, 1 row affected (0.00 sec)
```

Student table after inserting values

```
mysql> SELECT * FROM student;  
+-----+-----+-----+  
| rollno | sname    | city    |  
+-----+-----+-----+  
| 22     | kaushtubh | kolkata |  
| 23     | raunak    | bhagalpur |  
| 24     | raushan   | kolkata |  
+-----+-----+-----+  
3 rows in set (0.00 sec)
```

a)

```
mysql> SELECT name FROM teacher,subject,taughtby
-> WHERE teacher.tid=taughtby.tid AND taughtby.subno=subject.subno
-> AND dept="physics" AND subtitle="thermodynamics";
+-----+
| name |
+-----+
| anish |
+-----+
1 row in set (0.00 sec)
```

b)

```
mysql> UPDATE subject
-> SET subtitle = "RDBMS"
-> WHERE subtitle = "DBMS";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> DESC subject;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| subno | int(11) | NO | PRI | NULL | |
| subtitle | char(30) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT * FROM subject;
+-----+-----+
| subno | subtitle |
+-----+-----+
| 101 | thermodynamics |
| 102 | RDBMS |
| 103 | Algorithms |
+-----+-----+
3 rows in set (0.00 sec)
```

c)

```
mysql> SELECT * FROM student
-> WHERE city="kolkata"
-> AND rollno>20 AND rollno<25;
+-----+-----+-----+
| rollno | sname | city |
+-----+-----+-----+
| 22 | kaustubh | kolkata |
| 24 | raushan | kolkata |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

d)

```
mysql> SELECT * FROM student
-> WHERE city="kolkata"
-> ORDER BY rollno DESC;
+-----+-----+-----+
| rollno | sname   | city   |
+-----+-----+-----+
|      24 | raushan | kolkata |
|      22 | kaushubh | kolkata |
+-----+-----+-----+
2 rows in set (0.01 sec)
```