Assignment No - 5

Problem Statement :
Create the University Database having following specifications:

1.Department table(dept_no,dept_name,building_name)
Apply Unique constraint on name field

mysql> create database University;
Query OK, 1 row affected (0.00 sec)

mysql> use University;
Database changed

mysql> create table Department(dept_no int,dept_name varchar(15),bldg_name
varchar(15),unique(dept_name));
Query OK, 0 rows affected (0.08 sec)

mysql> desc Department;

```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| dept_no   | int(11)     | YES  |     | NULL    |       |
| dept_name | varchar(15) | YES  | UNI | NULL    |       |
| bldg_name | varchar(15) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
```
3 rows in set (0.00 sec)

2.Instructor table(ins_id,ins_name,dept_no,salary,mob_no)
Apply NOT NULL constraint on name field.

mysql> create table instructor(ins_id int,ins_name varchar(15) not null,dept_no int,salary
int,mob_no int,primary key(ins_id));
Query OK, 0 rows affected (0.08 sec)

mysql> desc instructor;

```
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
```

```
+----------+-------------+------+-----+---------+-------+
| ins_id   | int(11)     | NO   | PRI | 0       |       |
| ins_name | varchar(15) | NO   |     | NULL    |       |
| dept_no  | int(11)     | YES  |     | NULL    |       |
| salary   | int(11)     | YES  |     | NULL    |       |
| mob_no   | int(11)     | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

3.Course table(course_id,title,dept_no,credits)

```
mysql> create table course(course_id int,title varchar(15),dept_no int,credits int,primary
key(course_id));
Query OK, 0 rows affected (0.06 sec)
```

```
mysql> desc course;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| course_id | int(11)     | NO   | PRI | 0       |       |
| title     | varchar(15) | YES  |     | NULL    |       |
| dept_no   | int(11)     | YES  |     | NULL    |       |
| credits   | int(11)     | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

4.Teachers table(teacher_id,course_id,semester,year)

```
mysql> create table teachers(teacher_id int,course_id int,semester int, year year,foreign key
(teacher_id) references
instructor(ins_id),foreign key (course_id) references course(course_id));
Query OK, 0 rows affected (0.08 sec)
```

```
mysql> desc teachers;
+------------+---------+------+-----+---------+-------+
| Field      | Type    | Null | Key | Default | Extra |
+------------+---------+------+-----+---------+-------+
| teacher_id | int(11) | YES  | MUL | NULL    |       |
| course_id  | int(11) | YES  | MUL | NULL    |       |
| semester   | int(11) | YES  |     | NULL    |       |
| year       | year(4) | YES  |     | NULL    |       |
+------------+---------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

Quieries :

1.Add the primary key in department table.

mysql> alter table Department add primary key(dept_no);
Query OK, 0 rows affected (0.09 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc Department;
```
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| dept_no   | int(11)     | NO   | PRI | 0       |       |
| dept_name | varchar(15) | YES  | UNI | NULL    |       |
| bldg_name | varchar(15) | YES  |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
```
3 rows in set (0.00 sec)

2.Add the foreign key in instructor table.

mysql> alter table instructor add foreign key(dept_no) references Department(dept_no);
Query OK, 0 rows affected (0.13 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc instructor;
```
+----------+-------------+------+-----+---------+-------+
| Field    | Type        | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
| ins_id   | int(11)     | NO   | PRI | 0       |       |
| ins_name | varchar(15) | NO   |     | NULL    |       |
| dept_no  | int(11)     | YES  | MUL | NULL    |       |
| salary   | int(11)     | YES  |     | NULL    |       |
| mob_no   | int(11)     | YES  |     | NULL    |       |
+----------+-------------+------+-----+---------+-------+
```
5 rows in set (0.00 sec)

3.Modify the table department by addding a column budget.

mysql> alter table Department add column budget int;
Query OK, 0 rows affected (0.11 sec)
Records: 0 Duplicates: 0 Warnings: 0

4.Create unique index on mobile number of instructor table.

mysql> create unique index sr on instructor(mob_no);
Query OK, 0 rows affected (0.09 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> desc instructor;
+----------+-------------+------+-----+---------+-------+
| Field | Type | Null | Key | Default | Extra |
+----------+-------------+------+-----+---------+-------+
ins_id	int(11)	NO	PRI	0	
ins_name	varchar(15)	NO		NULL	
dept_no	int(11)	YES	MUL	NULL	
salary	int(11)	YES		NULL	
mob_no	int(11)	YES	UNI	NULL	
+----------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)

5.Create a view of instructor relation except the salary field.

mysql> create view inst_view as select ins_id,ins_name,dept_no,mob_no from instructor;
Query OK, 0 rows affected (0.03 sec)

6.Insert record into instructor table using newly created viewname.

mysql> insert into Department values(4,"Elect","D",null);
Query OK, 1 row affected (0.02 sec)

mysql> insert into inst_view values(4,"D",4,12000);
Query OK, 1 row affected (0.03 sec)

mysql> select * from inst_view;
+--------+----------+---------+--------+
| ins_id | ins_name | dept_no | mob_no |
+--------+----------+---------+--------+
| 4 | D | 4 | 12000 |
+--------+----------+---------+--------+
1 row in set (0.00 sec)

8.Delete record of particular instructor from instructor table using newly created viewname.

mysql> delete from inst_view where ins_id=4;
Query OK, 1 row affected (0.03 sec)

mysql> select * from inst_view;

Empty set (0.00 sec)

10.Remove the Budget from department table.

```
mysql> alter table Department drop budget;
Query OK, 1 row affected (0.14 sec)
Records: 1  Duplicates: 0  Warnings: 0
```

11.increase the size of the title field of course relation.

```
mysql> alter table course modify title varchar(20);
Query OK, 0 rows affected (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

12.Create a view by showing a instructor name with a department name and its salary.

```
mysql> create view newview1 as select ins_name,dept_name,salary from instructor,Department
where
instructor.dept_no=Department.dept_no;
Query OK, 0 rows affected (0.03 sec)
```

13.Update salary of particular instructor using update view.

```
mysql> update newview1 set salary=11000 where ins_name="C";
Query OK, 0 rows affected (0.00 sec)
Rows matched: 0  Changed: 0  Warnings: 0
```

14.Delete the index from the instructor table.

```
mysql> alter table instructor drop index sr;
Query OK, 0 rows affected (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

17.Delete the primary key from the department table.

```
mysql> alter table instructor drop foreign key instructor_ibfk_1;
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

```
mysql> alter table Department drop primary key;
Query OK, 1 row affected (0.11 sec)
Records: 1  Duplicates: 0  Warnings: 0
```