

Creating Database Named: University

```
mysql> create database university;
```

Query OK, 1 row affected (0.01 sec)

```
mysql> show databases;
```

```
+-----+
| Database      |
+-----+
| book_shop     |
| cat_app       |
| hospital      |
| information_schema |
| market        |
| medical        |
| mysql          |
| newdatabase    |
| performance_schema |
| sys           |
| university     |
+-----+
```

11 rows in set (0.00 sec)

Use this database:

```
mysql> USE university;
```

Database changed

Create table Department:

```
mysql> create table dept_table
```

```
-> (dept_no INT,
```

```
-> dept_name VARCHAR(50) UNIQUE,
```

```
-> building_name VARCHAR(50)
```

```
-> );
```

Query OK, 0 rows affected (0.12 sec)

mysql> desc dept_table;

Field	Type	Null	Key	Default	Extra
dept_no	int	YES		NULL	
dept_name	varchar(50)	YES	UNI	NULL	
building_name	varchar(50)	YES		NULL	

3 rows in set (0.05 sec)

Create Instruction table:

mysql> create table inst_table(

-> inst_id int,
-> inst_name varchar(50) NOT NULL,
-> dept_no int,
-> salary int,
-> mob_no int
->);

Query OK, 0 rows affected (0.06 sec)

mysql> desc inst_table;

Field	Type	Null	Key	Default	Extra
inst_id	int	YES		NULL	
inst_name	varchar(50)	NO		NULL	
dept_no	int	YES		NULL	
salary	int	YES		NULL	
mob_no	int	YES		NULL	

5 rows in set (0.01 sec)

Create table Course:

```
mysql> create table course_table(
```

```
-> course_id int,
```

```
-> title varchar(50),
```

```
-> dept_no int,
```

```
-> credits int
```

```
-> );
```

Query OK, 0 rows affected (0.06 sec)

```
mysql> desc course_table;
```

Field	Type	Null	Key	Default	Extra
course_id	int	YES		NULL	
title	varchar(50)	YES		NULL	
dept_no	int	YES		NULL	
credits	int	YES		NULL	

4 rows in set (0.01 sec)

Create table Teaches:

```
mysql> create table teaches(
```

```
-> teacher_id int,
```

```
-> course_id int,
```

```
-> semester int,
```

```
-> year int
```

```
-> );
```

Query OK, 0 rows affected (0.08 sec)

```
mysql> desc teaches;
```

Field	Type	Null	Key	Default	Extra
-------	------	------	-----	---------	-------

```

+-----+-----+-----+-----+-----+
| teacher_id | int | YES | | NULL | | |
| course_id | int | YES | | NULL | | |
| semester | int | YES | | NULL | | |
| year | int | YES | | NULL | | |
+-----+-----+-----+-----+

```

4 rows in set (0.01 sec)

QUERIES:

Add Primary Key in Department table:

```
mysql> ALTER TABLE dept_table ADD PRIMARY KEY(dept_no);
```

Query OK, 0 rows affected (0.18 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> DESC dept_table;
```

```

+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| dept_no | int | NO | PRI | NULL | |
| dept_name | varchar(50) | YES | UNI | NULL | |
| building_name | varchar(50) | YES | | NULL | |
+-----+-----+-----+-----+

```

3 rows in set (0.00 sec)

Add Foreign Key in Instructor table:

```
mysql> ALTER TABLE inst_table ADD FOREIGN KEY(dept_no) REFERENCES dept
_table(dept_no);
```

Query OK, 0 rows affected (0.30 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc inst_table;
```

```

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

```

```

+-----+-----+-----+-----+
| inst_id | int    | YES | | NULL | | |
| inst_name | varchar(50) | NO | | NULL | | |
| dept_no | int    | YES | MUL | NULL | | |
| salary | int    | YES | | NULL | | |
| mob_no | int    | YES | | NULL | | |
+-----+-----+-----+-----+

```

5 rows in set (0.01 sec)

Adding budget column in department table:

```
mysql> ALTER TABLE dept_table ADD budget INT;
```

Query OK, 0 rows affected (0.16 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc dept_table;
```

```

+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+
| dept_no    | int       | NO   | PRI | NULL    |      |
| dept_name  | varchar(50) | YES  | UNI | NULL    |      |
| building_name | varchar(50) | YES  | | NULL    |      |
| budget     | int       | YES  | | NULL    |      |
+-----+-----+-----+-----+

```

4 rows in set (0.04 sec)

Create unique index on mobile number of instructor table:

```
mysql> CREATE INDEX uniqueNo ON inst_table(mob_no);
```

Query OK, 0 rows affected (0.17 sec)

Records: 0 Duplicates: 0 Warnings:

Create a view of instructor relation except the salary field.

```
mysql> create view myview as select inst_id,inst_name,dept_no,mob_no from inst_table;
```

Query OK, 0 rows affected (0.02 sec)

```
mysql> desc myview;
```

Field	Type	Null	Key	Default	Extra
inst_id	int	YES		NULL	
inst_name	varchar(50)	NO		NULL	
dept_no	int	YES		NULL	
mob_no	int	YES		NULL	

4 rows in set (0.00 sec)

Insert record into instructor table using newly created viewname.

```
mysql> insert into myview values(1,'nishant',1,12);
```

Query OK, 1 row affected (0.01 sec)

```
mysql> insert into myview values(2,'shivam',1,12);
```

Query OK, 1 row affected (0.00 sec)

Update the department number of particular instructor using update view.

```
mysql> update myview set dept_no=2 where inst_name = 'nishant';
```

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from myview;
```

inst_id	inst_name	dept_no	mob_no
1	nishant	2	12
2	shivam	1	12

2 rows in set (0.00 sec)

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

```
mysql> delete from myview where inst_name = 'shivam';
```

Query OK, 1 row affected (0.00 sec)

```
mysql> select * from myview;
```

```
+-----+-----+-----+-----+
| inst_id | inst_name | dept_no | mob_no |
+-----+-----+-----+-----+
|      1 | nishant   |      2 |      12 |
+-----+-----+-----+-----+
```

1 row in set (0.00 sec)

Delete the last view

```
mysql> drop view myview;
```

Query OK, 0 rows affected (0.01 sec)

Remove the Budget from department table.

```
mysql> desc dept_table;
```

```
+-----+-----+-----+-----+-----+-----+
| Field      | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| dept_no    | int       | NO   | PRI | NULL    |      |
| dept_name  | varchar(50) | YES  | UNI | NULL    |      |
| building_name | varchar(50) | YES  |     | NULL    |      |
| budget     | int       | YES  |     | NULL    |      |
+-----+-----+-----+-----+-----+-----+
```

4 rows in set (0.00 sec)

```
mysql> alter table dept_table drop column budget;
```

Query OK, 0 rows affected (0.04 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc dept_table;
```

Field	Type	Null	Key	Default	Extra
dept_no	int	NO	PRI	NULL	
dept_name	varchar(50)	YES	UNI	NULL	
building_name	varchar(50)	YES		NULL	

3 rows in set (0.00 sec)

```
mysql> desc course_table;
```

Field	Type	Null	Key	Default	Extra
course_id	int	YES		NULL	
title	varchar(50)	YES		NULL	
dept_no	int	YES		NULL	
credits	int	YES		NULL	

4 rows in set (0.00 sec)

```
mysql> alter table course_table modify title varchar(100);
```

Query OK, 0 rows affected (0.08 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> desc course_table;
```

Field	Type	Null	Key	Default	Extra
course_id	int	YES		NULL	

title	varchar(100)	YES		NULL		
dept_no	int	YES		NULL		
credits	int	YES		NULL		
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+

4 rows in set (0.00 sec)

Rename the course table to another table name

```
mysql> alter table course_table rename to mycourse;
```

Query OK, 0 rows affected (0.02 sec)