```
1    DBMSL Assignment No 2 A
2    Name - Himanshu Vijay Lonkar
3    Roll No - C31149
4    Batch - T3
5
6    Output -
7
8    17.Create Database and show database.
9
10       mysql> create database University;
11
12       Query OK, 1 row affected (0.01 sec)
13
14       mysql> show databases;
15       +--------------------+
16       | Database           |
17       +--------------------+
18       | basic              |
19       | information_schema |
20       | mysql              |
21       | performance_schema |
22       | sys                |
23       | university         |
24       +--------------------+
25       6 rows in set (0.00 sec)
26
27    18.Create tables and show tables.
28
29       mysql> use University;
30       Database changed
31       mysql> create table Department(dept_no int,dept_name varchar(80)
         UNIQUE,building_name varchar(30));
32       Query OK, 0 rows affected (0.05 sec)
33
34       mysql> desc Department;
35       +---------------+-------------+------+-----+---------+-------+
36       | Field         | Type        | Null | Key | Default | Extra |
37       +---------------+-------------+------+-----+---------+-------+
38       | dept_no       | int         | YES  |     | NULL    |       |
39       | dept_name     | varchar(80) | YES  | UNI | NULL    |       |
40       | building_name | varchar(30) | YES  |     | NULL    |       |
41       +---------------+-------------+------+-----+---------+-------+
42       3 rows in set (0.01 sec)
43
44       mysql> create table Instructor(ins_id int,ins_name varchar(80) NOT NULL,dept_no
         int,salary int,mob_no int(15),Primary Key(ins_id));
45       Query OK, 0 rows affected, 1 warning (0.03 sec)
46
47       mysql> desc Instructor;
48       +----------+-------------+------+-----+---------+-------+
49       | Field    | Type        | Null | Key | Default | Extra |
50       +----------+-------------+------+-----+---------+-------+
51       | ins_id   | int         | NO   | PRI | NULL    |       |
52       | ins_name | varchar(80) | NO   |     | NULL    |       |
53       | dept_no  | int         | YES  |     | NULL    |       |
54       | salary   | int         | YES  |     | NULL    |       |
55       | mob_no   | int         | YES  |     | NULL    |       |
56       +----------+-------------+------+-----+---------+-------+
57       5 rows in set (0.00 sec)
58
59       mysql> create table Course(course_id int,title varchar(100),dept_no int,credits
         varchar(20));
60       Query OK, 0 rows affected (0.03 sec)
61
62       mysql> desc Course;
63       +-----------+--------------+------+-----+---------+-------+
64       | Field     | Type         | Null | Key | Default | Extra |
65       +-----------+--------------+------+-----+---------+-------+
66       | course_id | int          | YES  |     | NULL    |       |
```

```
67    | title     | varchar(100) | YES  |     | NULL    |       |
68    | dept_no   | int          | YES  |     | NULL    |       |
69    | credits   | varchar(20)  | YES  |     | NULL    |       |
70    +-----------+--------------+------+-----+---------+-------+
71    4 rows in set (0.00 sec)
72
73    mysql> create table Teaches(teacher_id int,course_id int,semester int,year
      varchar(30),foreign key(teacher_id) references Instructor(ins_id),foreign key(cou
74    rse_id) references Course(course_id));
75    ERROR 1822 (HY000): Failed to add the foreign key constraint. Missing index for
      constraint 'teaches_ibfk_2' in the referenced table 'course'
76
77    mysql> alter table Course add Primary Key(course_id);
78    Query OK, 0 rows affected (0.06 sec)
79    Records: 0  Duplicates: 0  Warnings: 0
80
81    mysql> desc Course;
82    +-----------+--------------+------+-----+---------+-------+
83    | Field     | Type         | Null | Key | Default | Extra |
84    +-----------+--------------+------+-----+---------+-------+
85    | course_id | int          | NO   | PRI | NULL    |       |
86    | title     | varchar(100) | YES  |     | NULL    |       |
87    | dept_no   | int          | YES  |     | NULL    |       |
88    | credits   | varchar(20)  | YES  |     | NULL    |       |
89    +-----------+--------------+------+-----+---------+-------+
90    4 rows in set (0.00 sec)
91
92    mysql> create table Teaches(teacher_id int,course_id int,semester int,year
      varchar(30),foreign key(teacher_id) references Instructor(ins_id),foreign
      key(course_id) references Course(course_id));
93    Query OK, 0 rows affected (0.05 sec)
94
95    mysql> desc Teaches;
96    +------------+-------------+------+-----+---------+-------+
97    | Field      | Type        | Null | Key | Default | Extra |
98    +------------+-------------+------+-----+---------+-------+
99    | teacher_id | int         | YES  | MUL | NULL    |       |
100   | course_id  | int         | YES  | MUL | NULL    |       |
101   | semester   | int         | YES  |     | NULL    |       |
102   | year       | varchar(30) | YES  |     | NULL    |       |
103   +------------+-------------+------+-----+---------+-------+
104   4 rows in set (0.00 sec)
105
106   mysql> show tables;
107   +----------------------+
108   | Tables_in_university |
109   +----------------------+
110   | course               |
111   | department           |
112   | instructor           |
113   | teaches              |
114   +----------------------+
115   4 rows in set (0.00 sec)
116
117  1.Add Primary Key into Department Table.
118
119   mysql> alter table Department add Primary Key(dept_no);
120   Query OK, 0 rows affected (0.04 sec)
121   Records: 0  Duplicates: 0  Warnings: 0
122
123   mysql> desc Department;
124   +---------------+-------------+------+-----+---------+-------+
125   | Field         | Type        | Null | Key | Default | Extra |
126   +---------------+-------------+------+-----+---------+-------+
127   | dept_no       | int         | NO   | PRI | NULL    |       |
128   | dept_name     | varchar(80) | YES  | UNI | NULL    |       |
129   | building_name | varchar(30) | YES  |     | NULL    |       |
130   +---------------+-------------+------+-----+---------+-------+
131   3 rows in set (0.00 sec)
```

```
132
133    2.Add Foreign Key into Instructor table.
134
135        mysql> alter table Instructor add foreign key(dept_no) references
           Department(dept_no);
136        Query OK, 0 rows affected (0.06 sec)
137        Records: 0  Duplicates: 0  Warnings: 0
138
139        mysql> desc Instructor;
140        +----------+-------------+------+-----+---------+-------+
141        | Field    | Type        | Null | Key | Default | Extra |
142        +----------+-------------+------+-----+---------+-------+
143        | ins_id   | int         | NO   | PRI | NULL    |       |
144        | ins_name | varchar(80) | NO   |     | NULL    |       |
145        | dept_no  | int         | YES  | MUL | NULL    |       |
146        | salary   | int         | YES  |     | NULL    |       |
147        | mob_no   | int         | YES  |     | NULL    |       |
148        +----------+-------------+------+-----+---------+-------+
149        5 rows in set (0.00 sec)
150
151    3.Modify the Department table by adding column Budget.
152
153        mysql> alter table Department add column Budget int;
154        Query OK, 0 rows affected (0.03 sec)
155        Records: 0  Duplicates: 0  Warnings: 0
156
157        mysql> desc Department;
158        +---------------+-------------+------+-----+---------+-------+
159        | Field         | Type        | Null | Key | Default | Extra |
160        +---------------+-------------+------+-----+---------+-------+
161        | dept_no       | int         | NO   | PRI | NULL    |       |
162        | dept_name     | varchar(80) | YES  | UNI | NULL    |       |
163        | building_name | varchar(30) | YES  |     | NULL    |       |
164        | Budget        | int         | YES  |     | NULL    |       |
165        +---------------+-------------+------+-----+---------+-------+
166        4 rows in set (0.00 sec)
167
168    4.Create a UNIQUE INDEX on mobile number of Instructor table.
169
170        mysql> create index index_mob on Instructor(mob_no);
171        Query OK, 0 rows affected (0.02 sec)
172        Records: 0  Duplicates: 0  Warnings: 0
173
174        mysql> show indexes from Instructor;
175
           +------------+------------+-----------+--------------+-------------+-----------+-----
           --------+----------+--------+------+------------+---------+---------------+---------+
           ------------+
176        | Table      | Non_unique | Key_name  | Seq_in_index | Column_name | Collation |
           Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
           Visible | Expression |
177
           +------------+------------+-----------+--------------+-------------+-----------+-----
           --------+----------+--------+------+------------+---------+---------------+---------+
           ------------+
178        | instructor |          0 | PRIMARY   |            1 | ins_id      | A
           |           0 |     NULL |   NULL |      | BTREE      |         |               |
179          | YES     | NULL      |
180        | instructor |          1 | dept_no   |            1 | dept_no     | A
           |           0 |     NULL |   NULL | YES  | BTREE      |         |               |
181          | YES     | NULL      |
182        | instructor |          1 | index_mob |            1 | mob_no      | A
           |           0 |     NULL |   NULL | YES  | BTREE      |         |               |
183          | YES     | NULL      |
184
           +------------+------------+-----------+--------------+-------------+-----------+-----
           --------+----------+--------+------+------------+---------+---------------+---------+
           ------------+
185        3 rows in set (0.02 sec)
```

```
186
187    mysql> desc Instructor;
188    +---------+-------------+------+-----+---------+-------+
189    | Field   | Type        | Null | Key | Default | Extra |
190    +---------+-------------+------+-----+---------+-------+
191    | ins_id  | int         | NO   | PRI | NULL    |       |
192    | ins_name | varchar(80) | NO   |     | NULL    |       |
193    | dept_no | int         | YES  | MUL | NULL    |       |
194    | salary  | int         | YES  |     | NULL    |       |
195    | mob_no  | int         | YES  | MUL | NULL    |       |
196    +---------+-------------+------+-----+---------+-------+
197    5 rows in set (0.00 sec)
198
199  5.Create a VIEW of Instructor Relation except the salary field.
200
201    mysql> create view Teacher_view as select ins_id,ins_name,dept_no,mob_no from
       Instructor;
202    Query OK, 0 rows affected (0.01 sec)
203
204    mysql> desc Teacher_view;
205    +---------+-------------+------+-----+---------+-------+
206    | Field   | Type        | Null | Key | Default | Extra |
207    +---------+-------------+------+-----+---------+-------+
208    | ins_id  | int         | NO   |     | NULL    |       |
209    | ins_name | varchar(80) | NO   |     | NULL    |       |
210    | dept_no | int         | YES  |     | NULL    |       |
211    | mob_no  | int         | YES  |     | NULL    |       |
212    +---------+-------------+------+-----+---------+-------+
213    4 rows in set (0.00 sec)
214
215    mysql> show tables;
216    +----------------------+
217    | Tables_in_university |
218    +----------------------+
219    | course               |
220    | department           |
221    | instructor           |
222    | teacher_view         |
223    | teaches              |
224    +----------------------+
225    5 rows in set (0.00 sec)
226
227  6.Insert record into Instructor table using newly created view name.
228
229    mysql> insert into Department
       values(1,'COMP','Old',10000),(2,'IT','Old',20000),(3,'ENTC','New',30000),(4,'MECH','O
       ld',40000);
230    Query OK, 4 rows affected (0.01 sec)
231    Records: 4  Duplicates: 0  Warnings: 0
232
233    mysql> select *from Department;
234    +---------+-----------+---------------+--------+
235    | dept_no | dept_name | building_name | Budget |
236    +---------+-----------+---------------+--------+
237    |       1 | COMP      | Old           |  10000 |
238    |       2 | IT        | Old           |  20000 |
239    |       3 | ENTC      | New           |  30000 |
240    |       4 | MECH      | Old           |  40000 |
241    +---------+-----------+---------------+--------+
242    4 rows in set (0.00 sec)
243
244    mysql> insert into Teacher_view values (1,'Prof M.S.Agrawal',1,1234567890),(2,'Prof
       G.D.Jadhav',2,543216789),(3,'Prof V.A.Gadekar',3,0987654321),(4,'Prof
       R.R.Bathe',4,678905432);
245    Query OK, 4 rows affected (0.03 sec)
246    Records: 4  Duplicates: 0  Warnings: 0
247
248    mysql> select *from Instructor;
249    +--------+------------------+---------+--------+------------+
```

```
250      | ins_id | ins_name          | dept_no | salary | mob_no     |
251      +--------+------------------+---------+--------+------------+
252      |      1 | Prof M.S.Agrawal |       1 |   NULL | 1234567890 |
253      |      2 | Prof G.D.Jadhav  |       2 |   NULL |  543216789 |
254      |      3 | Prof V.A.Gadekar |       3 |   NULL |  987654321 |
255      |      4 | Prof R.R.Bathe   |       4 |   NULL |  678905432 |
256      +--------+------------------+---------+--------+------------+
257      4 rows in set (0.00 sec)
258
259      mysql> select *from Teacher_view;
260      +--------+------------------+---------+------------+
261      | ins_id | ins_name          | dept_no | mob_no     |
262      +--------+------------------+---------+------------+
263      |      1 | Prof M.S.Agrawal |       1 | 1234567890 |
264      |      2 | Prof G.D.Jadhav  |       2 |  543216789 |
265      |      3 | Prof V.A.Gadekar |       3 |  987654321 |
266      |      4 | Prof R.R.Bathe   |       4 |  678905432 |
267      +--------+------------------+---------+------------+
268      4 rows in set (0.00 sec)
269
270   7.Update the department number of a particular instructor using update view.
271
272      mysql> update Teacher_view set dept_no=1 where ins_id=2;
273      Query OK, 1 row affected (0.01 sec)
274      Rows matched: 1  Changed: 1  Warnings: 0
275
276      mysql> select *from Instructor;
277      +--------+------------------+---------+--------+------------+
278      | ins_id | ins_name          | dept_no | salary | mob_no     |
279      +--------+------------------+---------+--------+------------+
280      |      1 | Prof M.S.Agrawal |       1 |   NULL | 1234567890 |
281      |      2 | Prof G.D.Jadhav  |       1 |   NULL |  543216789 |
282      |      3 | Prof V.A.Gadekar |       3 |   NULL |  987654321 |
283      |      4 | Prof R.R.Bathe   |       4 |   NULL |  678905432 |
284      +--------+------------------+---------+--------+------------+
285      4 rows in set (0.00 sec)
286
287      mysql> select *from Teacher_view;
288      +--------+------------------+---------+------------+
289      | ins_id | ins_name          | dept_no | mob_no     |
290      +--------+------------------+---------+------------+
291      |      1 | Prof M.S.Agrawal |       1 | 1234567890 |
292      |      2 | Prof G.D.Jadhav  |       1 |  543216789 |
293      |      3 | Prof V.A.Gadekar |       3 |  987654321 |
294      |      4 | Prof R.R.Bathe   |       4 |  678905432 |
295      +--------+------------------+---------+------------+
296      4 rows in set (0.00 sec)
297
298   8.Delete record of particular instructor from Instructor table using newly created view
      name.
299
300      mysql> delete from Teacher_view where ins_id=3;
301      Query OK, 1 row affected (0.00 sec)
302
303      mysql> select *from Instructor;
304      +--------+------------------+---------+--------+------------+
305      | ins_id | ins_name          | dept_no | salary | mob_no     |
306      +--------+------------------+---------+--------+------------+
307      |      1 | Prof M.S.Agrawal |       1 |   NULL | 1234567890 |
308      |      2 | Prof G.D.Jadhav  |       1 |   NULL |  543216789 |
309      |      4 | Prof R.R.Bathe   |       4 |   NULL |  678905432 |
310      +--------+------------------+---------+--------+------------+
311      3 rows in set (0.00 sec)
312
313      mysql> select *from Teacher_view;
314      +--------+------------------+---------+------------+
315      | ins_id | ins_name          | dept_no | mob_no     |
316      +--------+------------------+---------+------------+
317      |      1 | Prof M.S.Agrawal |       1 | 1234567890 |
```

```
318        |      2 | Prof G.D.Jadhav   |      1 |  543216789 |
319        |      4 | Prof R.R.Bathe    |      4 |  678905432 |
320        +--------+------------------+--------+------------+
321        3 rows in set (0.00 sec)
322
323    9.Delete the last VIEW.
324
325        mysql> drop view Teacher_view;
326        Query OK, 0 rows affected (0.01 sec)
327
328        mysql> show tables;
329        +----------------------+
330        | Tables_in_university |
331        +----------------------+
332        | course               |
333        | department           |
334        | instructor           |
335        | teaches              |
336        +----------------------+
337        4 rows in set (0.00 sec)
338
339    10.Remove the Budget from Department table.
340
341        mysql> alter table Department drop column Budget;
342        Query OK, 0 rows affected (0.02 sec)
343        Records: 0  Duplicates: 0  Warnings: 0
344
345        mysql> desc Department;
346        +---------------+-------------+------+-----+---------+-------+
347        | Field         | Type        | Null | Key | Default | Extra |
348        +---------------+-------------+------+-----+---------+-------+
349        | dept_no       | int         | NO   | PRI | NULL    |       |
350        | dept_name     | varchar(80) | YES  | UNI | NULL    |       |
351        | building_name | varchar(30) | YES  |     | NULL    |       |
352        +---------------+-------------+------+-----+---------+-------+
353        3 rows in set (0.00 sec)
354
355        mysql> select *from Department;
356        +---------+-----------+---------------+
357        | dept_no | dept_name | building_name |
358        +---------+-----------+---------------+
359        |       1 | COMP      | Old           |
360        |       2 | IT        | Old           |
361        |       3 | ENTC      | New           |
362        |       4 | MECH      | Old           |
363        +---------+-----------+---------------+
364        4 rows in set (0.00 sec)
365
366    11.Increase size of title field of Course Relation.
367
368        mysql> alter table Course modify title varchar(150);
369        Query OK, 0 rows affected (0.02 sec)
370        Records: 0  Duplicates: 0  Warnings: 0
371
372        mysql> desc Course ;
373        +-----------+--------------+------+-----+---------+-------+
374        | Field     | Type         | Null | Key | Default | Extra |
375        +-----------+--------------+------+-----+---------+-------+
376        | course_id | int          | NO   | PRI | NULL    |       |
377        | title     | varchar(150) | YES  |     | NULL    |       |
378        | dept_no   | int          | YES  |     | NULL    |       |
379        | credits   | varchar(20)  | YES  |     | NULL    |       |
380        +-----------+--------------+------+-----+---------+-------+
381        4 rows in set (0.00 sec)
382
383    12.Delete the INDEX from Instructor table.
384
385        mysql> alter table Instructor drop index index_mob;
386        Query OK, 0 rows affected (0.03 sec)
```

```
387    Records: 0  Duplicates: 0  Warnings: 0
388
389    mysql> desc Instructor;
390    +----------+-------------+------+-----+---------+-------+
391    | Field    | Type        | Null | Key | Default | Extra |
392    +----------+-------------+------+-----+---------+-------+
393    | ins_id   | int         | NO   | PRI | NULL    |       |
394    | ins_name | varchar(80) | NO   |     | NULL    |       |
395    | dept_no  | int         | YES  | MUL | NULL    |       |
396    | salary   | int         | YES  |     | NULL    |       |
397    | mob_no   | int         | YES  |     | NULL    |       |
398    +----------+-------------+------+-----+---------+-------+
399    5 rows in set (0.00 sec)
400    mysql> show indexes from Instructor;
401
       +------------+------------+----------+--------------+-------------+-----------+-------
       ------+----------+--------+------+------------+---------+---------------+---------+-
       -----------+
402    | Table      | Non_unique | Key_name | Seq_in_index | Column_name | Collation |
       Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
       Visible | Expression |
403
       +------------+------------+----------+--------------+-------------+-----------+-------
       ------+----------+--------+------+------------+---------+---------------+---------+-
       -----------+
404    | instructor |          0 | PRIMARY  |            1 | ins_id      | A
       |           0 |     NULL |   NULL |      | BTREE      |         |
405      | YES     | NULL     |
406    | instructor |          1 | dept_no  |            1 | dept_no     | A
       |           0 |     NULL |   NULL | YES  | BTREE      |         |
407      | YES     | NULL     |
408
       +------------+------------+----------+--------------+-------------+-----------+-------
       ------+----------+--------+------+------------+---------+---------------+---------+-
       -----------+
409    2 rows in set (0.01 sec)
410
411 13.Rename the Course table to another table name.
412
413    mysql> alter table Course RENAME Program;
414    Query OK, 0 rows affected (0.02 sec)
415
416    mysql> show tables;
417    +----------------------+
418    | Tables_in_university |
419    +----------------------+
420    | department           |
421    | instructor           |
422    | program              |
423    | teaches              |
424    +----------------------+
425    4 rows in set (0.00 sec)
426
427    mysql> desc Program;
428    +-----------+--------------+------+-----+---------+-------+
429    | Field     | Type         | Null | Key | Default | Extra |
430    +-----------+--------------+------+-----+---------+-------+
431    | course_id | int          | NO   | PRI | NULL    |       |
432    | title     | varchar(150) | YES  |     | NULL    |       |
433    | dept_no   | int          | YES  |     | NULL    |       |
434    | credits   | varchar(20)  | YES  |     | NULL    |       |
435    +-----------+--------------+------+-----+---------+-------+
436    4 rows in set (0.00 sec)
437
438 14.Create a VIEW by showing a instructor name and title of the course they teaches.
439
440    mysql> insert into Program values(1,'DBMSL',1,'A');
441    Query OK, 1 row affected (0.01 sec)
442
```

```
mysql> insert into Teaches values (1,1,1,'TE');
Query OK, 1 row affected (0.00 sec)

mysql> select *from Program;
+-----------+-------+---------+---------+
| course_id | title | dept_no | credits |
+-----------+-------+---------+---------+
|         1 | DBMSL |       1 | A       |
+-----------+-------+---------+---------+
1 row in set (0.00 sec)

mysql> select *from Instructor;
+--------+-----------------+---------+--------+------------+
| ins_id | ins_name        | dept_no | salary | mob_no     |
+--------+-----------------+---------+--------+------------+
|      1 | Prof M.S.Agrawal |      1 |   NULL | 1234567890 |
|      2 | Prof G.D.Jadhav |       1 |   NULL |  543216789 |
|      4 | Prof R.R.Bathe  |       4 |   NULL |  678905432 |
+--------+-----------------+---------+--------+------------+
3 rows in set (0.00 sec)

mysql> select *from Teaches;
+------------+-----------+----------+------+
| teacher_id | course_id | semester | year |
+------------+-----------+----------+------+
|          1 |         1 |        5 | TE   |
+------------+-----------+----------+------+
1 row in set (0.00 sec)

mysql> create view Teaches_view as select ins_name,title from
Instructor,Program,Teaches where Teaches.teacher_id=Instructor.ins_id and
Teaches.course_id=Program.course_id;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
+----------------------+
| Tables_in_university |
+----------------------+
| department           |
| instructor           |
| program              |
| teaches              |
| teaches_view         |
+----------------------+
5 rows in set (0.01 sec)

mysql> desc Teaches_view;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| ins_name | varchar(80)  | NO   |     | NULL    |       |
| title    | varchar(150) | YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
2 rows in set (0.01 sec)

mysql> select *from Teaches_view;
+-----------------+-------+
| ins_name        | title |
+-----------------+-------+
| Prof M.S.Agrawal | DBMSL |
+-----------------+-------+
1 row in set (0.00 sec)
```

15.Delete the primary key from the Department table.

```
mysql> show create table Instructor;

+------------+------------------------------------------------------------------
------------------------------------------------------------------------------
```

```
               ---------------------------------------------------------------------------
               ---------------------------------------------------------------------------
               --------------------------------------------------------------+
508            | Table      | Create Table


511                                                                       |
512

               +------------+--------------------------------------------------------------
               ---------------------------------------------------------------------------
               ---------------------------------------------------------------------------
               ---------------------------------------------------------------------------
               --------------------------------------------------------------+
513            | Instructor | CREATE TABLE `instructor` (
514              `ins_id` int NOT NULL,
515              `ins_name` varchar(80) NOT NULL,
516              `dept_no` int DEFAULT NULL,
517              `salary` int DEFAULT NULL,
518              `mob_no` int DEFAULT NULL,
519              PRIMARY KEY (`ins_id`),
520              KEY `dept_no` (`dept_no`),
521              CONSTRAINT `instructor_ibfk_1` FOREIGN KEY (`dept_no`) REFERENCES `department`
               (`dept_no`)
522            ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci |
523

               +------------+--------------------------------------------------------------
               ---------------------------------------------------------------------------
               ---------------------------------------------------------------------------
               ---------------------------------------------------------------------------
               --------------------------------------------------------------+
524            1 row in set (0.00 sec)
525
526            mysql> alter table Instructor drop foreign key `instructor_ibfk_1`;
527            Query OK, 0 rows affected (0.06 sec)
528            Records: 0  Duplicates: 0  Warnings: 0
529
530            mysql> alter table Department drop primary key;
531            Query OK, 4 rows affected (0.06 sec)
532            Records: 4  Duplicates: 0  Warnings: 0
533
534            mysql> desc Department;
535            +---------------+-------------+------+-----+---------+-------+
536            | Field         | Type        | Null | Key | Default | Extra |
537            +---------------+-------------+------+-----+---------+-------+
538            | dept_no       | int         | NO   |     | NULL    |       |
539            | dept_name     | varchar(80) | YES  | UNI | NULL    |       |
540            | building_name | varchar(30) | YES  |     | NULL    |       |
541            +---------------+-------------+------+-----+---------+-------+
542            3 rows in set (0.00 sec)
543
544     16.Create a Sequence on course id starting with 51
545
546            mysql> alter table Program modify course_id int AUTO_INCREMENT;
547            ERROR 1833 (HY000): Cannot change column 'course_id': used in a foreign key
               constraint 'teaches_ibfk_2' of table 'university.teaches'
548
549            mysql> alter table Teaches drop foreign key teaches_ibfk_2;
550            Query OK, 0 rows affected (0.02 sec)
551            Records: 0  Duplicates: 0  Warnings: 0
552
553            mysql> alter table Program modify course_id int AUTO_INCREMENT;
554            Query OK, 1 row affected (0.05 sec)
555            Records: 1  Duplicates: 0  Warnings: 0
556
557            mysql> alter table Program AUTO_INCREMENT=51;
558            Query OK, 0 rows affected (0.02 sec)
559            Records: 0  Duplicates: 0  Warnings: 0
560
561            mysql> desc Program;
```

```
562    +-----------+-------------+------+-----+---------+----------------+
563    | Field     | Type        | Null | Key | Default | Extra          |
564    +-----------+-------------+------+-----+---------+----------------+
565    | course_id | int         | NO   | PRI | NULL    | auto_increment |
566    | title     | varchar(150)| YES  |     | NULL    |                |
567    | dept_no   | int         | YES  |     | NULL    |                |
568    | credits   | varchar(20) | YES  |     | NULL    |                |
569    +-----------+-------------+------+-----+---------+----------------+
570    4 rows in set (0.00 sec)
571
572    mysql> insert into Program (title,dept_no,credits) values('TOC',1,'O');
573    Query OK, 1 row affected (0.01 sec)
574    mysql> insert into Program (title,dept_no,credits) values('SPOS',2,'O');
575    Query OK, 1 row affected (0.00 sec)mysql> select * from Program;
576    +-----------+-------+---------+---------+
577    | course_id | title | dept_no | credits |
578    +-----------+-------+---------+---------+
579    |         1 | DBMSL |       1 | A       |
580    |        51 | TOC   |       1 | O       |
581    |        52 | SPOS  |       2 | O       |
582    +-----------+-------+---------+---------+
583    3 rows in set (0.00 sec)
584
585    19.Delete all the records with truncate command
586
587    mysql> truncate table Department;
588    Query OK, 0 rows affected (0.04 sec)
589
590    mysql> select *from Department;
591    Empty set (0.00 sec)
592
593    mysql> truncate table Instructor;
594    ERROR 1701 (42000): Cannot truncate a table referenced in a foreign key constraint
       (`university`.`teaches`, CONSTRAINT `teaches_ibfk_1`)
595    mysql> alter table Teaches drop foreign key teaches_ibfk_1;
596    Query OK, 0 rows affected (0.02 sec)
597    Records: 0  Duplicates: 0  Warnings: 0
598
599    mysql> truncate table Instructor;
600    Query OK, 0 rows affected (0.04 sec)
601
602    mysql> select *from Instructor;
603    Empty set (0.00 sec)
604
605    mysql> truncate table Program;
606    ERROR 1701 (42000): Cannot truncate a table referenced in a foreign key constraint
       (`university`.`teaches`, CONSTRAINT `teaches_ibfk_2`)
607    mysql> alter table Teaches drop foreign key teaches_ibfk_2;
608    Query OK, 0 rows affected (0.02 sec)
609    Records: 0  Duplicates: 0  Warnings: 0
610
611    mysql> truncate table Program;
612    Query OK, 0 rows affected (0.03 sec)
613
614    mysql> select *from Program;
615    Empty set (0.00 sec)
616
617    mysql> truncate table Teaches;
618    Query OK, 0 rows affected (0.04 sec)
619
620    mysql> select * from Teaches;
621    Empty set (0.00 sec)
622
623    20.Delete Teaches Table.
624
625    mysql> drop table Teaches;
626    Query OK, 0 rows affected (0.01 sec)
627
628    mysql> show tables;
```

```
+---------------------+
| Tables_in_university |
+---------------------+
| department          |
| instructor          |
| program             |
| teaches_view        |
+---------------------+
4 rows in set (0.00 sec)
```