

DBMSL Assignment No.-2 (A)

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Output

17.Create Database and show database.

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
4 rows in set (0.00 sec)

mysql> create database university;
Query OK, 1 row affected (0.01 sec)
```

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| mysql |
| performance_schema |
| sys |
| university |
+-----+
5 rows in set (0.00 sec)
```

18.Create tables and show tables.

```
mysql> use university;
Database changed
mysql> create table department(dept_no int, dept_name varchar(45) unique ,
building_name varchar(45));
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> desc department;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| dept_no | int | YES | | NULL | |
| dept_name | varchar(45) | YES | UNI | NULL | |
| building_name | varchar(45) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> create table instructor(ins_id int, ins_name varchar(45) not null,dept_no int,
-> salary int,mob_no int(15),primary key(ins_id));
Query OK, 0 rows affected, 1 warning (0.02 sec)
```

```
mysql> desc instructor;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ins_id | int | NO | PRI | NULL | |
| ins_name | varchar(45) | NO | | NULL | |
| dept_no | int | YES | | NULL | |
| salary | int | YES | | NULL | |
| mob_no | int | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> create table course(course_id int primary key, title varchar(45), dept_no int,
```

```

69 credits int);
70 Query OK, 0 rows affected (0.02 sec)
71
72 mysql> desc course;
73 +-----+-----+-----+-----+-----+-----+
74 | Field      | Type      | Null | Key | Default | Extra |
75 +-----+-----+-----+-----+-----+-----+
76 | course_id  | int       | NO   | PRI | NULL    |       |
77 | title      | varchar(45) | YES  |     | NULL    |       |
78 | dept_no    | int       | YES  |     | NULL    |       |
79 | credits    | int       | YES  |     | NULL    |       |
80 +-----+-----+-----+-----+-----+-----+
81 4 rows in set (0.00 sec)
82
83 mysql> create table teachers(teacher_id int(10), course_id int(10), semester
84 int(10), year varchar(15),
85     -> foreign key(teacher_id) references instructor(ins_id),foreign key (course_id)
86     references course(course_id));
87 Query OK, 0 rows affected, 3 warnings (0.02 sec)
88
89 mysql> desc teachers;
90 +-----+-----+-----+-----+-----+-----+
91 | Field      | Type      | Null | Key | Default | Extra |
92 +-----+-----+-----+-----+-----+-----+
93 | teacher_id | int       | YES  | MUL | NULL    |       |
94 | course_id  | int       | YES  | MUL | NULL    |       |
95 | semester   | int       | YES  |     | NULL    |       |
96 | year       | varchar(15) | YES  |     | NULL    |       |
97 +-----+-----+-----+-----+-----+-----+
98 4 rows in set (0.00 sec)

```

1.Add Primary Key into Department Table.

```

100
101 mysql> alter table department add constraint primary key(dept_no);
102 Query OK, 0 rows affected (0.03 sec)
103 Records: 0 Duplicates: 0 Warnings: 0
104
105 mysql> desc department;
106 +-----+-----+-----+-----+-----+-----+
107 | Field      | Type      | Null | Key | Default | Extra |
108 +-----+-----+-----+-----+-----+-----+
109 | dept_no    | int       | NO   | PRI | NULL    |       |
110 | dept_name  | varchar(45) | YES  | UNI | NULL    |       |
111 | building_name | varchar(45) | YES  |     | NULL    |       |
112 +-----+-----+-----+-----+-----+-----+
113 3 rows in set (0.00 sec)

```

2.Add Foreign Key into Instructor table.

```

114
115 mysql> alter table instructor add foreign key(dept_no) references
116 department(dept_no);
117
118 Query OK, 0 rows affected (0.03 sec)
119 Records: 0 Duplicates: 0 Warnings: 0
120
121 mysql> desc instructor;
122 +-----+-----+-----+-----+-----+-----+
123 | Field      | Type      | Null | Key | Default | Extra |
124 +-----+-----+-----+-----+-----+-----+
125 | ins_id     | int       | NO   | PRI | NULL    |       |
126 | ins_name   | varchar(45) | NO   |     | NULL    |       |
127 | dept_no    | int       | YES  | MUL | NULL    |       |
128 | salary     | int       | YES  |     | NULL    |       |
129 | mob_no     | int       | YES  |     | NULL    |       |
130 +-----+-----+-----+-----+-----+-----+
131 5 rows in set (0.00 sec)

```

3.Modify the Department table by adding column Budget.

```

134

```

```

135
136 mysql> alter table department add column budget int(10);
137 Query OK, 0 rows affected, 1 warning (0.01 sec)
138 Records: 0 Duplicates: 0 Warnings: 1
139
140 mysql> desc department;
141 +-----+-----+-----+-----+-----+-----+
142 | Field | Type | Null | Key | Default | Extra |
143 +-----+-----+-----+-----+-----+-----+
144 | dept_no | int | NO | PRI | NULL | |
145 | dept_name | varchar(45) | YES | UNI | NULL | |
146 | building_name | varchar(45) | YES | | NULL | |
147 | budget | int | YES | | NULL | |
148 +-----+-----+-----+-----+-----+-----+
149 4 rows in set (0.00 sec)
150

```

4.Create a UNIQUE INDEX on mobile number of Instructor table.

```

151
152 mysql> create unique index sr on instructor(mob_no);
153 Query OK, 0 rows affected (0.02 sec)
154 Records: 0 Duplicates: 0 Warnings: 0
155
156 mysql> show indexes from instructor;
157
158 +-----+-----+-----+-----+-----+-----+
159 | Table | Non_unique | Key_name | Seq_in_index | Column_name | Collation |
160 | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment |
161 | Visible | Expression |
162 +-----+-----+-----+-----+-----+-----+
163 | instructor | 0 | PRIMARY | 1 | ins_id | A |
164 | 0 | NULL | NULL | | BTREE | |
165 YES | NULL |
166 | instructor | 0 | sr | 1 | mob_no | A |
167 | 0 | NULL | NULL | YES | BTREE | |
168 YES | NULL |
169 | instructor | 1 | dept_no | 1 | dept_no | A |
170 | 0 | NULL | NULL | YES | BTREE | |
171 YES | NULL |
172
173 +-----+-----+-----+-----+-----+-----+
174 | 3 rows in set (0.01 sec)
175

```

5.Create a VIEW of Instructor Relation except the salary field.

```

166
167 mysql> create view ins_view as select ins_id , ins_name , dept_no , mob_no from
168 instructor;
169 Query OK, 0 rows affected (0.00 sec)
170
171 mysql> desc ins_view;
172 +-----+-----+-----+-----+-----+-----+
173 | Field | Type | Null | Key | Default | Extra |
174 +-----+-----+-----+-----+-----+-----+
175 | ins_id | int | NO | | NULL | |
176 | ins_name | varchar(45) | NO | | NULL | |
177 | dept_no | int | YES | | NULL | |
178 | mob_no | int | YES | | NULL | |
179 +-----+-----+-----+-----+-----+-----+
180 4 rows in set (0.00 sec)
181
182 mysql> show tables;
183 +-----+
184 | Tables_in_university |
185

```

```

186      +-----+
187      | course      |
188      | department  |
189      | ins_view    |
190      | instructor  |
191      | teachers    |
192      +-----+
193      5 rows in set (0.01 sec)

```

6.Insert record into Instructor table using newly created view name.

```

196
197      mysql> insert into department
198      values(1,'COMP','Old',10000),(2,'IT','Old',20000),(3,'E
199      NTC','New',30000),(4,'MECH','Old',40000);
200      Query OK, 4 rows affected (0.00 sec)
201      Records: 4  Duplicates: 0  Warnings: 0

```

```

202      mysql> select * from department;
203      +-----+-----+-----+-----+
204      | dept_no | dept_name | building_name | budget |
205      +-----+-----+-----+-----+
206      |      1 | COMP      | Old           | 10000 |
207      |      2 | IT        | Old           | 20000 |
208      |      3 | ENTC      | New           | 30000 |
209      |      4 | MECH      | Old           | 40000 |
210      +-----+-----+-----+-----+
211      4 rows in set (0.01 sec)

```

```

212
213      mysql> insert into ins_view values (1,'Prof M.S.Agrawal',1,999999999),
214      -> (2,'Prof V.A.Gadekar',2,111111111),
215      -> (3,'Prof G.D.Jadhav',3,222222222),
216      -> (4,'Prof R.R.Bathe',4,333333333);
217      Query OK, 4 rows affected (0.01 sec)
218      Records: 4  Duplicates: 0  Warnings: 0

```

```

219
220      mysql> select * from ins_view;
221      +-----+-----+-----+-----+
222      | ins_id | ins_name      | dept_no | mob_no  |
223      +-----+-----+-----+-----+
224      |      1 | Prof M.S.Agrawal |      1 | 999999999 |
225      |      2 | Prof V.A.Gadekar |      2 | 111111111 |
226      |      3 | Prof G.D.Jadhav |      3 | 222222222 |
227      |      4 | Prof R.R.Bathe  |      4 | 333333333 |
228      +-----+-----+-----+-----+
229      4 rows in set (0.00 sec)

```

7.Update the department number of a particular instructor using update view.

```

230
231
232      mysql> update ins_view set dept_no = 1 where ins_id = 4;
233      Query OK, 1 row affected (0.01 sec)
234      Rows matched: 1  Changed: 1  Warnings: 0

```

```

235
236      mysql> select * from ins_view;
237      +-----+-----+-----+-----+
238      | ins_id | ins_name      | dept_no | mob_no  |
239      +-----+-----+-----+-----+
240      |      1 | Prof M.S.Agrawal |      1 | 999999999 |
241      |      2 | Prof V.A.Gadekar |      2 | 111111111 |
242      |      3 | Prof G.D.Jadhav |      3 | 222222222 |
243      |      4 | Prof R.R.Bathe  |      1 | 333333333 |
244      +-----+-----+-----+-----+
245      4 rows in set (0.00 sec)

```

8. Delete record of particular instructor from Instructor table using newly created view name.

```

246
247
248
249      mysql> delete from ins_view where ins_id = 4;
250      Query OK, 1 row affected (0.00 sec)

```

```

253 mysql> select * from ins_view;
254 +-----+-----+-----+-----+
255 | ins_id | ins_name          | dept_no | mob_no  |
256 +-----+-----+-----+-----+
257 |      1 | Prof M.S.Agrawal |      1  |      0  |
258 |      2 | Prof V.A.Gadekar |      2  | 11111111 |
259 |      3 | Prof G.D.Jadhav  |      3  | 22222222 |
260 +-----+-----+-----+-----+
261 3 rows in set (0.00 sec)

```

9.Delete the last VIEW.

```

265 mysql> drop view ins_view;
266 Query OK, 0 rows affected (0.01 sec)
267
268 mysql> show tables;
269 +-----+
270 | Tables_in_university |
271 +-----+
272 | course                |
273 | department            |
274 | instructor            |
275 | teachers              |
276 +-----+
277 4 rows in set (0.00 sec)

```

10.Remove the Budget from Department table.

```

281 mysql> alter table department drop budget;
282 Query OK, 0 rows affected (0.01 sec)
283 Records: 0 Duplicates: 0 Warnings: 0
284
285 mysql> desc department;
286 +-----+-----+-----+-----+-----+-----+
287 | Field      | Type      | Null | Key | Default | Extra |
288 +-----+-----+-----+-----+-----+-----+
289 | dept_no    | int       | NO   | PRI | NULL    |       |
290 | dept_name  | varchar(45) | YES  | UNI | NULL    |       |
291 | building_name | varchar(45) | YES  |     | NULL    |       |
292 +-----+-----+-----+-----+-----+-----+
293 3 rows in set (0.00 sec)

```

11.Increase size of title field of Course Relation.

```

297 mysql> desc course;
298 +-----+-----+-----+-----+-----+-----+
299 | Field      | Type      | Null | Key | Default | Extra |
300 +-----+-----+-----+-----+-----+-----+
301 | course_id  | int       | NO   | PRI | NULL    |       |
302 | title      | varchar(45) | YES  |     | NULL    |       |
303 | dept_no    | int       | YES  |     | NULL    |       |
304 | credits    | int       | YES  |     | NULL    |       |
305 +-----+-----+-----+-----+-----+-----+
306 4 rows in set (0.00 sec)
307
308 mysql> alter table course change column title title varchar(55);
309 Query OK, 0 rows affected (0.01 sec)
310 Records: 0 Duplicates: 0 Warnings: 0
311
312 mysql> desc course;
313 +-----+-----+-----+-----+-----+-----+
314 | Field      | Type      | Null | Key | Default | Extra |
315 +-----+-----+-----+-----+-----+-----+
316 | course_id  | int       | NO   | PRI | NULL    |       |
317 | title      | varchar(55) | YES  |     | NULL    |       |
318 | dept_no    | int       | YES  |     | NULL    |       |
319 | credits    | int       | YES  |     | NULL    |       |
320 +-----+-----+-----+-----+-----+-----+
321 4 rows in set (0.00 sec)

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375

12.Delete the INDEX from Instructor table.

```
mysql> alter table instructor drop index sr;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> show indexes from instructor;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
instructor	0	PRIMARY	1	ins_id	A	0	NULL		NULL	BTREE			YES	NULL
instructor	1	dept_no	1	dept_no	A	0	NULL		NULL	BTREE			YES	NULL

2 rows in set (0.00 sec)

13.Rename the Course table to another table name.

```
mysql> alter table course rename courses;
Query OK, 0 rows affected (0.01 sec)

mysql> show tables;
+-----+
| Tables_in_university |
+-----+
| courses               |
| department            |
| instructor            |
| teachers              |
+-----+
4 rows in set (0.00 sec)
```

14.Create a VIEW by showing a instructor name and title of the course they teaches.

```
mysql> insert into courses values(1,'DBMSL',1,3);
Query OK, 1 row affected (0.01 sec)

mysql> select * from courses;
+-----+-----+-----+-----+
| course_id | title | dept_no | credits |
+-----+-----+-----+-----+
| 1         | DBMSL | 1       | 3       |
+-----+-----+-----+-----+
1 row in set (0.00 sec)

mysql> insert into teachers values (1,1,1,'TE');
Query OK, 1 row affected (0.01 sec)

mysql> select * from teaches;
ERROR 1146 (42S02): Table 'university.teaches' doesn't exist
mysql> select * from teachers;
+-----+-----+-----+-----+
| teacher_id | course_id | semester | year |
+-----+-----+-----+-----+
```

```

376      |          1 |          1 |          1 | TE |
377      +-----+-----+-----+-----+
378      1 row in set (0.00 sec)

```

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

```
mysql> show tables;
```

```
+-----+
| Tables_in_university |
+-----+
| courses               |
| department            |
| instructor            |
| teachers              |
| teaches_view          |
+-----+
5 rows in set (0.00 sec)
```

```
mysql> desc Teaches view;
```

```

+-----+-----+-----+-----+-----+-----+
| Field | Type      | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ins_name | varchar(45) | NO   |     | NULL    |       |
| title    | varchar(55) | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 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;
```

```
+ .....+  
.....  
.....  
.....  
.....+  
  
| Table      | Create Table  
  
                                             |  
  
+ .....+  
=====
```

```
+ .....+  
| instructor | CREATE TABLE `instructor` (  
    `ins_id` int NOT NULL,  
    `ins_name` varchar(45) NOT NULL,  
    `dept_no` int DEFAULT NULL,  
    `salary` int DEFAULT NULL,  
    `mob_no` int DEFAULT NULL,  
    PRIMARY KEY (`ins_id`),  
    KEY `dept_no` (`dept_no`),  
    CONSTRAINT `instructor_ibfk_1` FOREIGN KEY (`dept_no`) REFERENCES `department`  
        (`dept no`)
```



```

495 | Field      | Type      | Null | Key | Default | Extra      |
496 +-----+-----+-----+-----+-----+-----+
497 | course_id | int       | NO   | PRI | NULL    | auto_increment |
498 | title     | varchar(55) | YES  |     | NULL    |               |
499 | dept_no   | int       | YES  |     | NULL    |               |
500 | credits   | int       | YES  |     | NULL    |               |
501 +-----+-----+-----+-----+-----+-----+
502 4 rows in set (0.00 sec)

```

```

503
504 mysql> insert into courses (title,dept_no,credits) values('TOC',1,3);
505 Query OK, 1 row affected (0.00 sec)

```

```

506
507 mysql> insert into courses (title,dept_no,credits) values('SPOS',2,3);
508 Query OK, 1 row affected (0.01 sec)

```

```

509
510 mysql> select *from courses;
511 +-----+-----+-----+-----+
512 | course_id | title | dept_no | credits |
513 +-----+-----+-----+-----+
514 |          1 | DBMSL |          1 |          3 |
515 |          51 | TOC   |          1 |          3 |
516 |          52 | SPOS  |          2 |          3 |
517 +-----+-----+-----+-----+
518 3 rows in set (0.00 sec)

```

19.Delete all the records with truncate command.

```

521
522 mysql> truncate table department;
523 Query OK, 0 rows affected (0.02 sec)

```

```

524
525 mysql> select *from department;
526 Empty set (0.00 sec)

```

```

527
528 mysql> truncate table instructor;
529 ERROR 1701 (42000): Cannot truncate a table referenced in a foreign key constraint
(`university`.`teachers`, CONSTRAINT `teachers_ibfk_1`)

```

```

530
531 mysql> alter table teachers drop foreign key teachers_ibfk_1;
532 Query OK, 0 rows affected (0.01 sec)
533 Records: 0 Duplicates: 0 Warnings: 0

```

```

534
535 mysql> truncate table instructor;
536 Query OK, 0 rows affected (0.02 sec)

```

```

537
538 mysql> select *from instructor;
539 Empty set (0.00 sec)

```

```

540
541 mysql> truncate table courses;
542 Query OK, 0 rows affected (0.01 sec)

```

```

543
544 mysql> select *from courses;
545 Empty set (0.00 sec)

```

```

546
547 mysql> truncate table teachers;
548 Query OK, 0 rows affected (0.02 sec)

```

```

549
550 mysql> select *from teachers;
551 Empty set (0.00 sec)

```

```

552
553 mysql> show tables;
554 +-----+
555 | Tables_in_university |
556 +-----+
557 | courses               |
558 | department            |
559 | instructor            |
560 | teachers              |
561 | teaches_view          |
562 +-----+

```

563 5 rows in set (0.00 sec)

564

565 **20.Delete Teaches Table.**

566

567 mysql> drop table teachers;

568 Query OK, 0 rows affected (0.01 sec)

569

570 mysql> show tables;

571 +-----+
572 | Tables_in_university |
573 +-----+
574 | courses |
575 | department |
576 | instructor |
577 | teaches_view |
578 +-----+
579 4 rows in set (0.00 sec)