Assignment-4

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1 Q-Create a user called universityDB+last 4 digits of roll number:

Query:

CREATE USER 'universityDB0039'@'localhost' IDENTIFIED BY 'Password';

mysql> create user 'universityDB0039'@'localhost' identified by 'Password'; Query OK, 0 rows affected (0.09 sec)

Query to grant all privileges to the user:

GRANT ALL PRIVILEGES ON university.* TO 'universityDB0039'@'localhost';

mysql> grant all privileges on university.* to 'universityDB0039'@'localhost'; Query OK, 0 rows affected (0.12 sec)

2 Q-Create a database called university:

Query:

CREATE DATABASE university

3 Q-Connect the database:

Query:

USE university

mysql> use university; Database changed

4 Q-Create the tables in the university database using DDL.sql file:

Query:

Source Documents/DBIS-Labs/Assignment-4/DDL.sql

```
mysql> source Documents/DBIS-Labs/Assignment-4/DDL.sql
Query OK, 0 rows affected (0.46 sec)
Query OK, 0 rows affected (0.64 sec)
Query OK, 0 rows affected (1.52 sec)
Query OK, 0 rows affected (0.47 sec)
Query OK, 0 rows affected (0.63 sec)
Query OK, 0 rows affected (0.61 sec)
Query OK, 0 rows affected (0.65 sec)
Query OK, 0 rows affected (0.64 sec)
Query OK, 0 rows affected (0.48 sec)
Query OK, 0 rows affected (0.47 sec)
Query OK, 0 rows affected (0.61 sec)
mysql> SHOW TABLES;
 Tables_in_university |
 advisor
 classroom
  course
  department
  instructor
  prereq
  section
  student
  takes
  teaches
  time_slot
```

5 Q-Load the data into tables using insert.sql:

Query:

Source Documents/DBIS-Labs/Assignment-4/InsertValues.sql;

```
mysql> source Documents/DBIS-Labs/Assignment-4/InsertValues.sql;
Query OK, 0 rows affected (0.04 sec)
Query OK, 0 rows affected (0.00 sec)
Query OK, 0 rows affected (0.00 sec)
Query OK, 0 rows affected (0.01 sec)
Query OK, 0 rows affected (0.00 sec)
Query OK, 0 rows affected (0.00 sec)
Query OK, 0 rows affected (0.00 sec)
Query OK, 0 rows affected (0.01 sec)
Query OK, 0 rows affected (0.00 sec)
Query OK, 0 rows affected (0.01 sec)
Query OK, 0 rows affected (0.00 sec)
Query OK, 1 row affected (0.07 sec)
Query OK, 1 row affected (0.10 sec)
Query OK, 1 row affected (0.09 sec)
Query OK, 1 row affected (0.07 sec)
Query OK, 1 row affected (0.08 sec)
Query OK, 1 row affected (0.11 sec)
Query OK, 1 row affected (0.10 sec)
Ouerv OK 1 row affected (A A6 sec)
```

Result of the Query:

```
mysql> SELECT * FROM classroom;
 building | room_number | capacity |
 Packard | 101
          | 514
 Painter
                                10
 Taylor
          3128
                                 70
           100
 Watson
                                 30
           | 120
                                 50 I
 Watson
 rows in set (0.00 sec)
mysql> SELECT * FROM course;
                                         | dept_name | credits |
 course_id | title
 BIO-101 | Intro. to Biology
                                         | Biology
 BIO-301 | Genetics | Biology
BIO-399 | Computational Biology | Biology
                                                             3
          | Intro. to Computer Science | Comp. Sci. |
| Game Design | Comp. Sci
 CS-101
                                                              4
 CS-190
                                                              4
                                                              3
 CS-315 | Robotics
                                         | Comp. Sci. |
 CS-319
          | Image Processing
                                         | Comp. Sci.
                                                              3 |
 CS-347
          | Database System Concepts
                                         | Comp. Sci.
                                                              3 |
 EE-181
            | Intro. to Digital Systems | Elec. Eng.
                                                              3 I
 FIN-201
            | Investment Banking
                                                              3
                                         | Finance
 HIS-351
            | World History
                                         | History
                                                              3
 MU-199
             Music Video Production
                                           Music
                                                               3
 PHY-101
          | Physical Principles
                                         | Physics
                                                              4 |
13 rows in set (0.00 sec)
```

6 Q-Get the details of all the tables using information_ schema:

Query:

SELECT table_ name, column_ name, data_ type
FROM information_ schema.columns
WHERE table_ name = 'table_ name'

results for various tables

advisor

classroom

```
mysql> SELECT table_name, column_name, data_type FROM information_schema.columns WHERE table_name = 'course';
+------+
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
+-----+
| course | course_id | varchar |
| course | credits | decimal |
| course | dept_name | varchar |
| course | title | varchar |
+-----+
4 rows in set (0.00 sec)
```

course

department

instructor

prereq

```
mysql> SELECT table_name, column_name, data_type FROM information_schema.columns WHERE table_name = 'section';
 TABLE_NAME | COLUMN_NAME | DATA_TYPE |
  section
               building
                            | varchar
               course_id
  section
                              varchar
             | room_number | varchar
  section
 section
             | sec_id
                            | varchar
                            | varchar
             | semester
  section
             | time_slot_id | varchar
  section
  section
             | year
                            | decimal
  rows in set (0.01 sec)
```


student

rows in set (0.00 sec)

```
mysql> SELECT table_name, column_name, data_type FROM information_schema.columns WHERE table_name = 'takes';
 TABLE_NAME | COLUMN_NAME | DATA_TYPE |
 takes
             | course_id | varchar
             | grade
 takes
                           | varchar
             | ID
 takes
                           | varchar
             | sec_id
  takes
                           | varchar
  takes
              semester
                           | varchar
 takes
             | year
                           | decimal
6 rows in set (0.00 sec)
```

takes

```
mysql> SELECT table_name, column_name, data_type FROM information_schema.columns WHERE table_name = 'teaches';
 TABLE_NAME | COLUMN_NAME | DATA_TYPE |
            | course_id | varchar
 teaches
                          | varchar
 teaches
             | ID
 teaches
             | sec_id
                           | varchar
 teaches
             semester
                           | varchar
 teaches
             | year
                           | decimal
 rows in set (0.00 sec)
```

teaches

```
mysql> SELECT table_name, column_name, data_type FROM information_schema.columns WHERE table_name = 'time_slot';
 TABLE_NAME | COLUMN_NAME | DATA_TYPE |
 time_slot | day
                            | varchar
            | end_hr
 time_slot
                            | decimal
 time_slot
time_slot
             end_min
                            | decimal
            | start_hr
                            | decimal
 time slot
            | start min
                            | decimal
 time_slot | time_slot_id | varchar
6 rows in set (0.00 sec)
```

time-slot

- 7 Q-Install Phpmyadmin tool (if not installed) for interacting with MySql using a GUI interface.
 - 1. Login to the user which you have created in Question number 1
 - 2. Use database University
 - 3. Do some 1 insert and select operation on each table of the University database

```
Show query box

1 row inserted. (Query took 0.0061 seconds.)

INSERT INTO `prereq`(`course_id`, `prereq_id`) VALUES ('MM-201','PHY-101');

[ Edit inline ] [ Edit ] [ Create PHP code ]
```

```
Show query box

1 row inserted. (Query took 0.0057 seconds.)

INSERT INTO `time_slot`(`time_slot_id`, `day`, `start_hr`, `start_min`, `end_hr`, `end_min`) VALUES

[ Edit inline ] [ Edit ] [ Create PHP code ]
```

```
Show query box

1 row inserted. (Query took 0.0043 seconds.)

INSERT INTO `advisor`(`s_ID`, `i_ID`) VALUES ('S02','I02');

[ Edit inline ] [ Edit ] [ Create PHP code ]
```

```
Show query box

√ 1 row inserted. (Query took 0.0053 seconds.)
 INSERT INTO `takes`(`ID`, `course id`, `sec id`, `semester`, `year`, `grade`) VALUES ('S02', 'MM-201'
[ Edit inline ] [ Edit ] [ Create PHP code ]
  Show query box

√ 1 row inserted. (Query took 0.0052 seconds.)
 INSERT INTO `student`(`ID`, `name`, `dept_name`, `tot_cred`) VALUES ('S02', 'Rahul', 'MMAE', '64');
[ Edit inline ] [ Edit ] [ Create PHP code ]
  Show query box

√ 1 row inserted. (Query took 0.0067 seconds.)
 INSERT INTO `teaches`(`ID`, `course_id`, `sec_id`, `semester`, `year`) VALUES ('I02','MM-201','Sec_2
[ Edit inline ] [ Edit ] [ Create PHP code ]
  Show query box

√ 1 row inserted. (Query took 0.0061 seconds.)
 INSERT INTO `section`(`course id`, `sec id`, `semester`, `year`, `building`, `room number`, `time sl
 ('MM-201','Sec_2','Winter','2019','Bhopali','102','B');
[ Edit inline ] [ Edit ] [ Create PHP code ]
```

```
Show query box

√ 1 row inserted. (Query took 0.0111 seconds.)
 INSERT INTO `instructor`(`ID`, `name`, `dept name`, `salary`) VALUES ('IO2', 'Raj', 'MMAE', '60000');
[ Edit inline ] [ Edit ] [ Create PHP code ]
   Show query box

√ 1 row inserted. (Query took 0.0244 seconds.)
 INSERT INTO `course`(`course_id`, `title`, `dept_name`, `credits`) VALUES ('MM-201', 'Machine', 'MMAE'
[ Edit inline ] [ Edit ] [ Create PHP code ]
  Show query box

√ 1 row inserted. (Query took 0.0047 seconds.)
 INSERT INTO `department`(`dept_name`, `building`, `budget`) VALUES ('MMAE', 'Bhopali', '60000');
[ Edit inline ] [ Edit ] [ Create PHP code ]
  Show query box

√ 1 row inserted. (Query took 0.0106 seconds.)

 INSERT INTO `classroom`(`building`, `room number`, `capacity`) VALUES ('Bhopali','102','90');
[ Edit inline ] [ Edit ] [ Create PHP code ]
```

8 Q-Execute the following queries:

i. Find the course id, title, instructor id and name of those instructors who are from CSE department but are teaching a course of Civil department in the year 2009. Arrange results in ascending order of instructor names

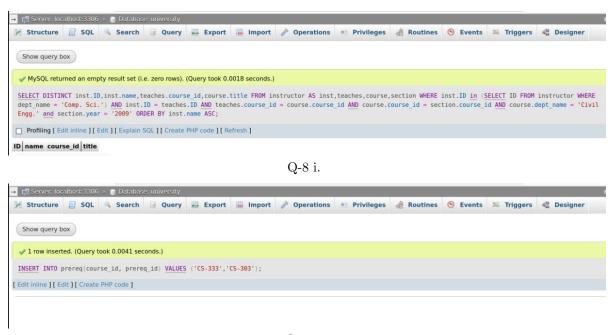
ii.Add a new course with course_ id as cs333 (with suitable values for other attributes) for the CSE department which will have cs303 as a prerequisite. Write insert statements for the same.

iii.Update salaries of instructors by 10% if their departments have a budget of more than 900000 rupees.Write the update statements for the same.

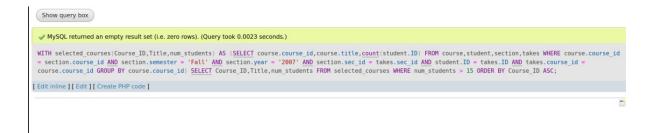
iv. Find CSE department courses (id and title) and number of students taking that course in the year 2007 and semester Fall where the number is greater than 15. Arrange the results in ascending order of course id.

Queries Are in the 200010039_{-} 8.sql file

Outputs:



Q-8 ii.



Q-8 iii.



Q-8 iv.