Assignment – 4

ISHIKA SHARMA (200010020)

1. CREATE USER 'universityDB0020'@'localhost' IDENTIFIED BY 'New@45678';

```
mysql> create user 'universityDB0020'@'localhost' identified by 'New@45678';
Query OK, 0 rows affected (0.04 sec)
mysql> grant all privileges on university.* to 'universityDB0020'@'localhost';
Query OK, 0 rows affected (0.00 sec)
```

2. CREATE DATABASE university;

```
ishika@ishika-virtual-machine: $ sudo mysql -u universityDB0020 -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.30-0ubuntu0.22.04.1 (Ubuntu)

Copyright (c) 2000, 2022, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

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

3. USE university;

```
mysql> use university;
Database changed
```

4. source ./Downloads/Assignment4/DDL.sql;

```
mysql> source ./Downloads/Assignment4/DDL.sql;
Query OK, 0 rows affected (0.04 sec)

Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 0 rows affected (0.02 sec)

Query OK, 0 rows affected (0.01 sec)
```

Assignment – 4

ISHIKA SHARMA (200010020)

5. source ./Downloads/Assignment4/InsertValues.sql;

```
mysql> source ./Downloads/Assignment4/InsertValues.sql;
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)
```

6. Information Schema of each table:

Assignment – 4

```
mysql> select table_name, column_name, data_type
    -> from information_schema.columns
    -> where table_name = 'advisor';
 TABLE_NAME | COLUMN_NAME | DATA_TYPE |
| advisor | s_ID | varchar
| advisor | i_ID | varchar
2 rows in set (0.00 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'classroom';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
    | classroom | building | varchar
| classroom | room_number | varchar
| classroom | capacity | decimal
3 rows in set (0.00 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'course';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
     | course | course_id | varchar
| course | title | varchar
| course | dept_name | varchar
| course | credits | decimal
4 rows in set (0.00 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'department';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
    | department | dept_name | varchar
| department | building | varchar
| department | budget | decimal
3 rows in set (0.01 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'instructor
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
 instructor | ID | varchar
instructor | name | varchar
instructor | dept_name | varchar
 instructor | salary | decimal
4 rows in set (0.00 sec)
```

Assignment – 4

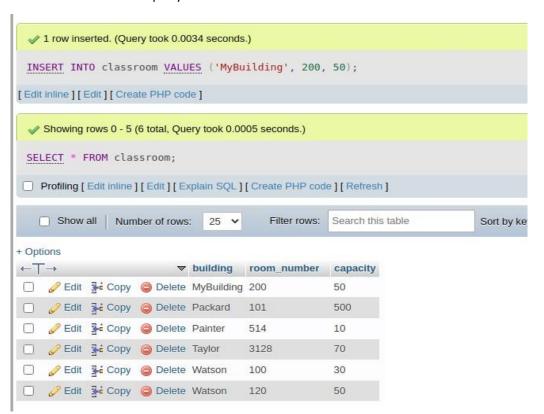
```
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'prereq';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
| prereq | course_id | varchar
               | prereq_id | varchar
prereq
2 rows in set (0.00 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'section';
+-----
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
| section | course_id | varchar | section | sec_id | varchar | section | semester | varchar | section | year | decimal | section | building | varchar | section | room_number | varchar | section | time_slot_id | varchar
  ------
7 rows in set (0.00 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table name = 'student';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
  -----
| student | ID | varchar
| student | name | varchar
| student | dept_name | varchar
| student | tot_cred | decimal
4 rows in set (0.00 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'takes';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
| takes | ID | varchar
| takes | course_id | varchar
| takes | sec_id | varchar
| takes | semester | varchar
                                | varchar
| takes
| takes
               | year
| grade
                                 | decimal
                                  | varchar
6 rows in set (0.00 sec)
```

Assignment - 4

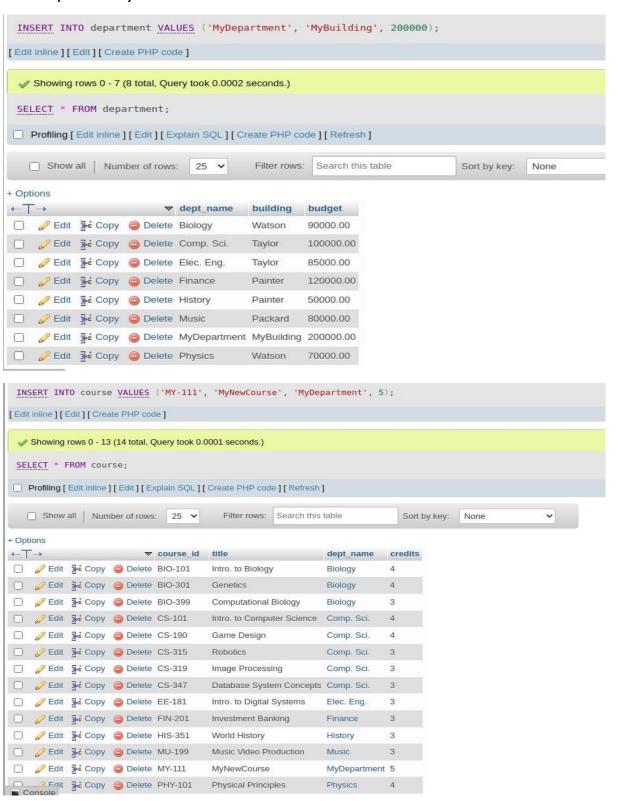
ISHIKA SHARMA (200010020)

```
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'teaches';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
  ------+---
 teaches | ID | varchar
teaches | course_id | varchar
teaches | sec_id | varchar
                            | varchar
 teaches
            semester
                            | varchar
 teaches
                             | decimal
            | year
5 rows in set (0.00 sec)
mysql> select table_name, column_name, data_type from information_schema.column
s where table_name = 'time_slot';
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
 time_slot | time_slot_id | varchar
                             | varchar
| decimal
  time slot | day
  time_slot | start_hr
 time_slot | start_min | decimal
time_slot | end_hr | decimal
  time_slot | end_min
                              decimal
6 rows in set (0.00 sec)
```

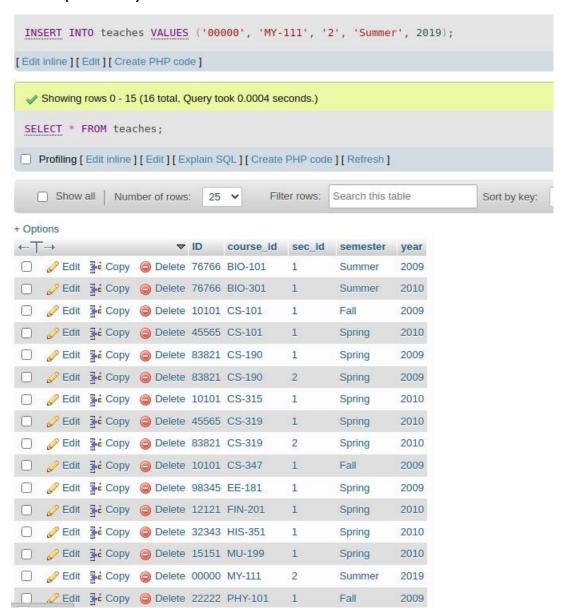
7. Run a select and insert query on each table:



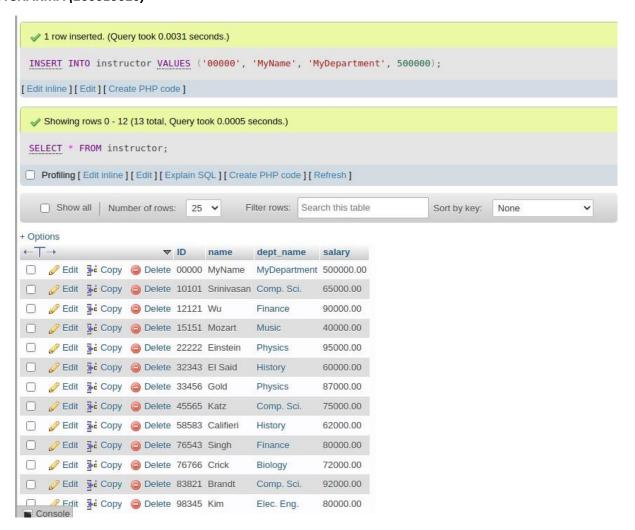
Assignment – 4



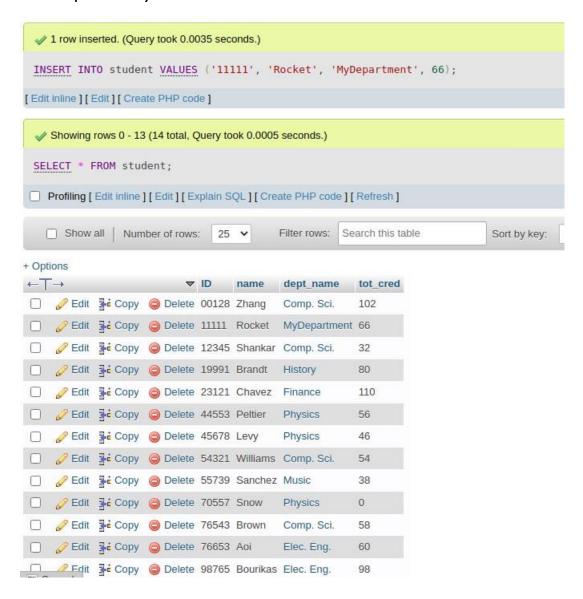
Assignment – 4



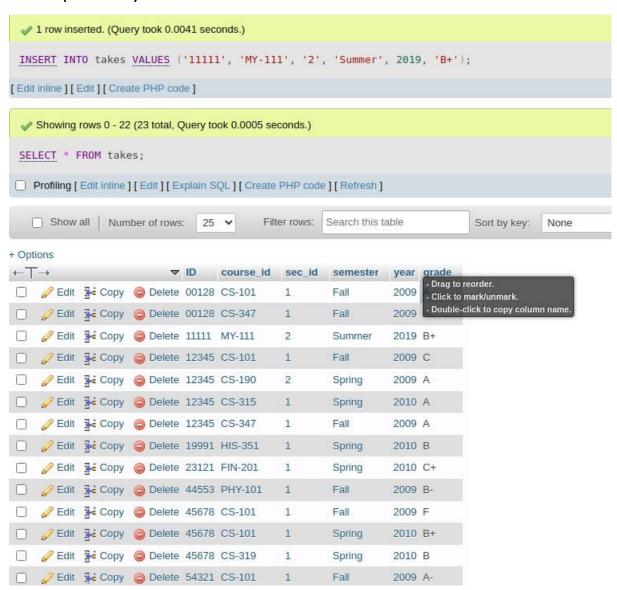
Assignment – 4



Assignment – 4



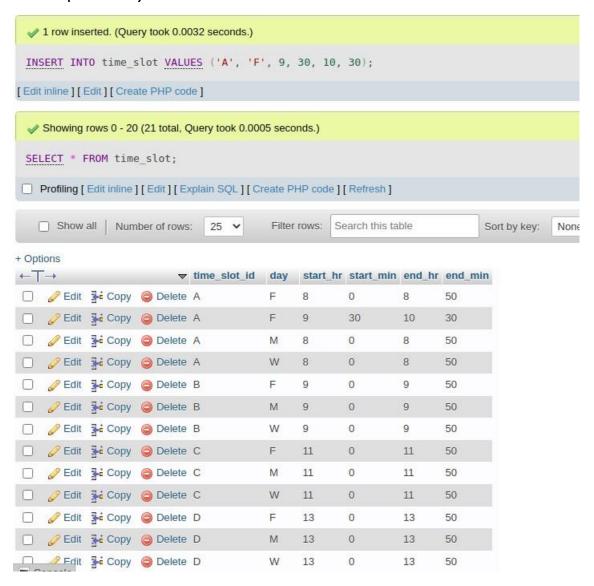
Assignment – 4



Assignment – 4

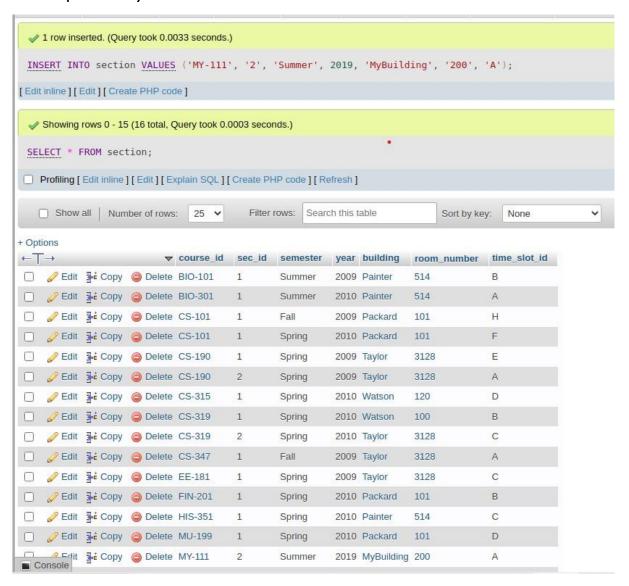


Assignment – 4



Assignment - 4

ISHIKA SHARMA (200010020)



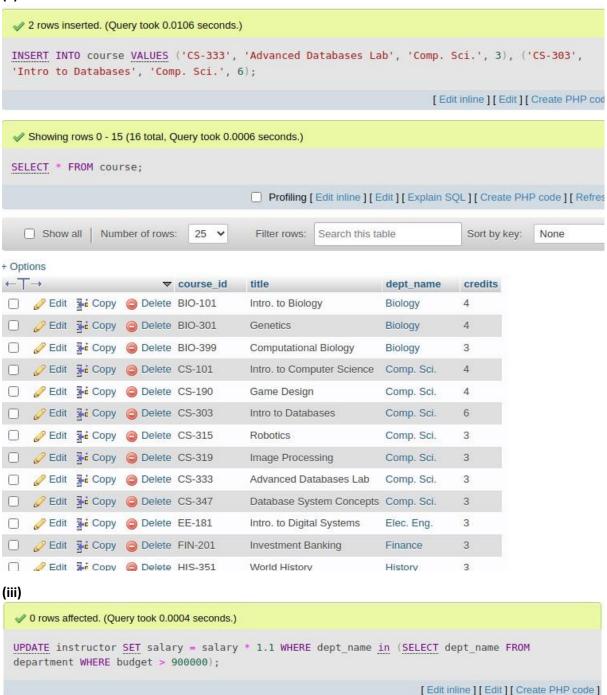
8. (i) No instructor teaches a course that does not belong to his department



Assignment - 4

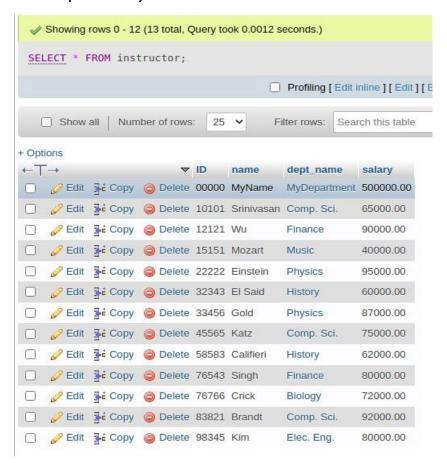
ISHIKA SHARMA (200010020)

(ii)



Assignment - 4

ISHIKA SHARMA (200010020)



(iv)

