# CS-313 - Assignment 4

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September 13, 2022

# Answer 1

SQL commands to create a user called university DB0029

create user universityDB0029@localhost identified by 'Password\*123'; grant all privileges on universityDB0029.\* to universityDB0029@localhost;

```
mysql> create user universityDB0029@localhost identified by 'Password*123';
Query OK, 0 rows affected (0.42 sec)
mysql> grant all privileges on universityDB0029.* to universityDB0029@localhost;
Query OK, 0 rows affected (0.02 sec)
```

Terminal command to login with university DB0029 user mysql -u universityDB0029 -p

```
monusoyal@DESKTOP-C7BLGHJ:~$ mysql -u universityDB0029 -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.30-0ubuntu0.22.04.1 (Ubuntu)

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

SQL command to create the university database create database university;

```
mysql> create database university;
Query OK, 1 row affected (0.04 sec)
```

# Answer 3

SQL command to connect the database use university;

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

# Answer 4

SQL command to run the DDL.sql file for creating the tables in university database

 $source\ DDL.sql$ 

```
mysql> source DDL.sql
Query OK, 0 rows affected (0.46 sec)

Query OK, 0 rows affected (0.16 sec)

Query OK, 0 rows affected (0.18 sec)

Query OK, 0 rows affected (0.09 sec)

Query OK, 0 rows affected (0.19 sec)

Query OK, 0 rows affected (0.16 sec)

Query OK, 0 rows affected (0.14 sec)

Query OK, 0 rows affected (0.16 sec)

Query OK, 0 rows affected (0.16 sec)

Query OK, 0 rows affected (0.17 sec)

Query OK, 0 rows affected (0.09 sec)

Query OK, 0 rows affected (0.09 sec)

Query OK, 0 rows affected (0.16 sec)
```

SQL command to run the InsertValues.sql file for loading the data into tables

 $source\ Insert Values.sql$ 

```
mysql> source InsertValues.sql
Query OK, 0 rows affected (0.02 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 (0.01 sec)

Query OK, 0 rows affected (0.01 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.02 sec)

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

# Answer 6

SQL commands to get the details of the tables of university database

#### 1. advisor table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "advisor";

#### 2. classroom table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "classroom";

```
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)
```

#### 3. course table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "course":

```
mysql> select table_name, column_name, data_type from information_schema.column
 where table_name = "course";
 TABLE NAME | COLUMN NAME | DATA TYPE
 course
               course id
                             varchar
               title
                             varchar
 course
 course
               dept_name
                             varchar
               credits
                             decimal
 course
 rows in set (0.01 sec)
```

# 4. department table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "department";

```
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)
```

#### 5. instructor table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "instructor";

## 6. prereq table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "prereq";

```
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 | prereq_id | varchar |
+------+
2 rows in set (0.01 sec)
```

#### 7. section table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "section";

```
mysql> select table_name, column_name, data_type from information_schema.column
 where table name = "section";
 TABLE NAME | COLUMN NAME | DATA TYPE
              course id
 section
                              varchar
 section
              sec id
                              varchar
 section
              semester
                              varchar
 section
                              decimal
              year
              building
                              varchar
 section
 section
              room_number
                              varchar
  section
              time_slot_id | varchar
  rows in set (0.01 sec)
```

#### 8. student table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "student":

```
nysql> select table_name, column_name, data_type from information_schema.column
 where table name = "student";
 TABLE NAME | COLUMN NAME | DATA TYPE
              ID
 student
                            varchar
 student
              name
                            varchar
 student
              dept_name
                            varchar
 student
            tot_cred
                            decimal
 rows in set (0.01 sec)
```

#### 9. takes table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "takes";

```
nysql> select table_name, column_name, data_type from information_schema.column
s where table_name = "takes";
 TABLE NAME | COLUMN NAME | DATA TYPE
 takes
                             varchar
 takes
              course_id
                             varchar
              sec id
 takes
                             varchar
 takes
              semester
                             varchar
 takes
                             decimal
              year
 takes
                             varchar
              grade
 rows in set (0.00 sec)
```

#### 10. teaches table

select table\_name, column\_name, data\_type from information\_schema.columns where table\_name = "teaches";

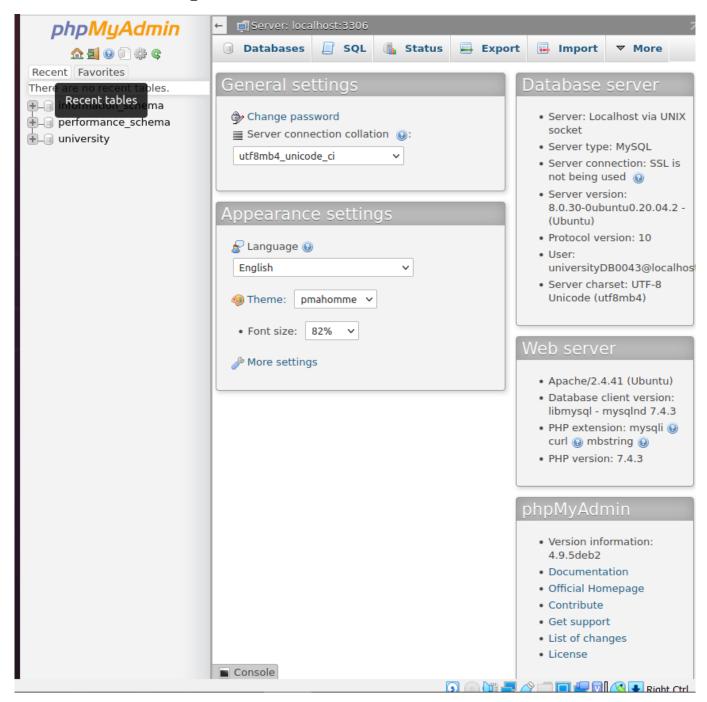
```
mysql> select table_name, column_name, data_type from information_schema.column
s where table name = "teaches";
 TABLE NAME | COLUMN NAME | DATA TYPE
 teaches
                             varchar
 teaches
              course_id
                             varchar
 teaches
              sec id
                             varchar
 teaches
              semester
                             varchar
 teaches
              year
                             decimal
 rows in set (0.00 sec)
```

#### 11. time\_slot table

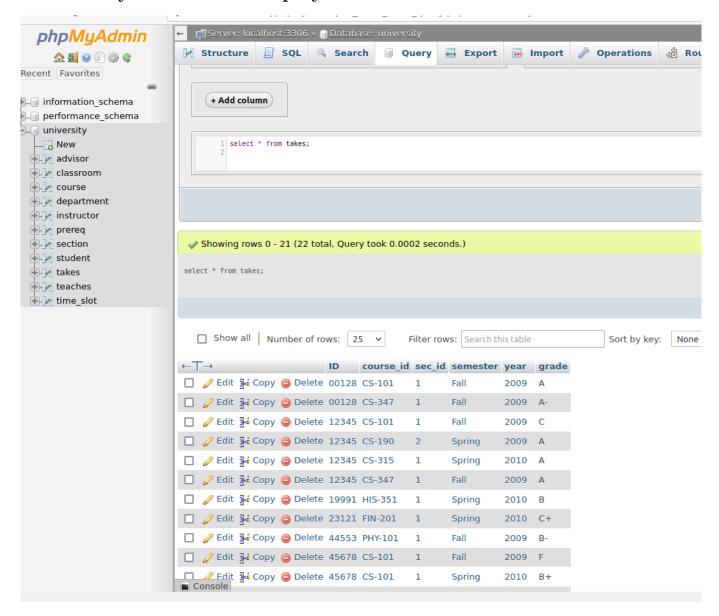
select table\_name, column\_name, data\_type
from information\_schema.columns
where table\_name = "time\_slot";

```
ysql> select table_name, column_name, data_type from information_schema.column
where table_name = "time_slot";
 TABLE NAME | COLUMN NAME | DATA TYPE
 time slot
              time_slot_id |
                             varchar
time_slot
              day
                             varchar
time_slot
              start_hr
                             decimal
 time_slot
              start_min
                             decimal
              end_hr
 time slot
                             decimal
             end min
                             decimal
 time slot
rows in set (0.01 sec)
```

### 1. Interface after login



2. university database on Phpmyadmin



- 3. Insert and select operations on tables
- (i). advisor table

INSERT INTO 'advisor' ('s\_ID', 'i\_ID') VALUES('10001', '30001'); SELECT \* FROM advisor WHERE advisor.s\_ID = '10001';



### (ii). classroom table

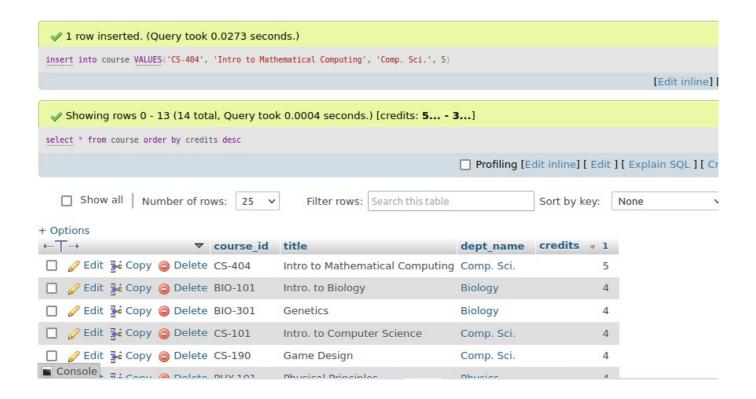
INSERT INTO 'classsroom' ('building', 'room<sub>n</sub>umber', 'capacity')VALUES('H9', '33SELECT \* FROM classroomWHERE classroom.capacity = '6';



# (iii). course table

INSERT INTO 'course' ('course\_id', 'title', 'dept\_name', 'credits')
VALUES('CS-404', 'Intro to Mathematical Computing', 'Comp. Sci.',
5);

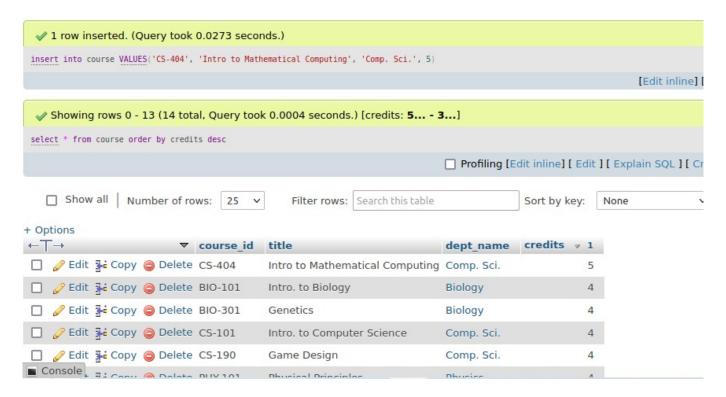
SELECT \* FROM course ORDER BY credits desc;



## (iv). course table

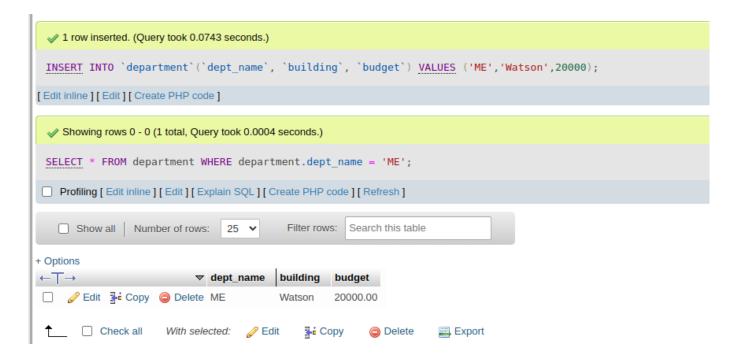
INSERT INTO 'course' ('course\_id', 'title', 'dept\_name', 'credits')
VALUES('CS-404', 'Intro to Mathematical Computing', 'Comp. Sci.',
5);

SELECT \* FROM course ORDER BY credits desc;



## (v). department table

INSERT INTO 'department' ('dept\_name', 'building', 'budget')
VALUES('ME', 'Watson', 20000);
SELECT \* FROM department WHERE department.dept\_name = 'ME';



### (vi). instructor table

INSERT INTO 'instructor' ('ID', 'name', 'dept\_name', 'salary')
VALUES('30001', 'pranjal', 'ME', 30000);
SELECT \* FROM instructor WHERE instructor.dept\_name = 'ME';



## (vii). prereq table

INSERT INTO 'prereq' ('course\_id', 'prereq\_id')
VALUES('RR-101', 'BIO-301');
SELECT \* FROM prereq WHERE courseid = 'RR-101';



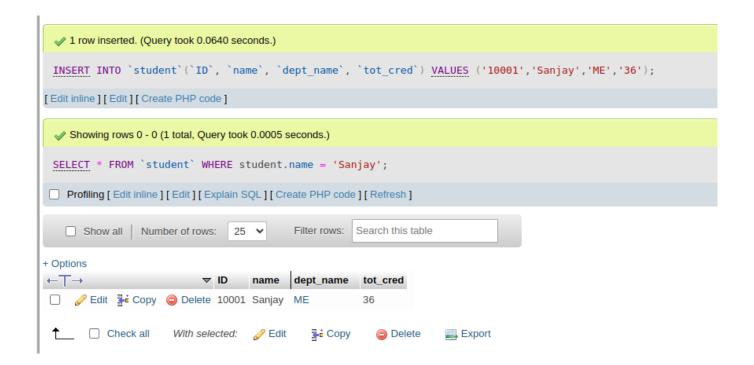
## (viii). section table

INSERT INTO 'section' ('course\_id', 'sec\_id', 'semester', 'year', 'build-ing', 'room\_number', 'time\_slot\_id')
VALUES('RR-101', '2', 'summer', '2022', 'H9', '33', 'C');
SELECT \* FROM section WHERE year = 2022:



# (ix). student table

INSERT INTO 'student' ('ID', 'name', 'dept\_name', 'tot\_cred')
VALUES('10001', 'Sanjay', 'ME', '36');
SELECT \* FROM student WHERE student.name = 'Sanjay';



### (x). takes table

INSERT INTO 'time\_slot' ('ID', 'course\_id', 'sec\_id', 'semester', 'year', 'grade')

VALUES('10001', 'RR-101', '2', 'Summer', 2022, 'F'); SELECT \* FROM time\_slot WHERE grade = 'F';



## (xi). time\_slot table

 $INSERT\ INTO\ 'takes'\ ('ID',\ 'time\_slot\_id',\ 'day',\ 'start\_hr',\ 'start\_min',\ 'end\_hr')$ 

VALUES('C', 'S', '12', '30', '14', '30'); SELECT \* FROM takes WHERE day = '5';



