

Assignment – 4
Rahul Raj (200010044)

1. CREATE USER 'universityDB0044'@'localhost' IDENTIFIED BY 'Raj@8923';

```
mysql> create user 'universityDB0044'@'localhost' identified by 'Raj@8923';  
Query OK, 0 rows affected (6.70 sec)
```

```
mysql> grant all privileges on university.* to 'universityDB0044'@'localhost';  
Query OK, 0 rows affected (0.77 sec)
```

2. CREATE DATABASE university;

```
byc  
geniusraj@geniusraj-Nitro-AN517-51:~$ sudo mysql -u universityDB0044 -p  
Enter password:  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 10  
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> █
```

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 (0.02 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)
```

```
mysql> show tables;
+-----+
| Tables_in_university |
+-----+
| advisor               |
| classroom             |
| course               |
| department            |
| instructor            |
| prereq               |
| section              |
| student              |
| takes                |
| teaches              |
| time_slot             |
+-----+
11 rows in set (0.00 sec)
```

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 (0.00 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 (0.00 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 (0.00 sec)
```

```
mysql> show tables;
+-----+
| Tables_in_university |
+-----+
| advisor               |
| classroom             |
| course                |
| department            |
| instructor            |
| prereq                |
| section               |
| student               |
| takes                 |
| teaches               |
| time_slot              |
+-----+
11 rows in set (0.00 sec)
```

6. Information Schema of each table:

```
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> show tables;
```

```
+-----+
| Tables_in_university |
+-----+
| advisor               |
| classroom              |
| course                |
| department             |
| instructor             |
| prereq                 |
| section                |
| student                |
| takes                  |
| teaches                |
| time_slot              |
+-----+
11 rows in set (0.00 sec)
```

```
mysql> select table_name, column_name, data_type from information_schema.columns
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.columns 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.columns 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.columns 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)
```

```
mysql> select table_name, column_name, data_type from information_schema.columns
where table_name = 'prereq';
```

```
+-----+-----+-----+
| TABLE_NAME | COLUMN_NAME | DATA_TYPE |
+-----+-----+-----+
| prereq      | course_id   | varchar    |
| prereq      | prereq_id   | varchar    |
+-----+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> select table_name, column_name, data_type from information_schema.columns
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.columns
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
takes	year	decimal
takes	grade	varchar

```
6 rows in set (0.00 sec)
```

```
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
teaches	semester	varchar
teaches	year	decimal

```
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
time_slot	day	varchar
time_slot	start_hr	decimal
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:

✓ 1 row inserted. (Query took 0.0034 seconds.)

```
INSERT INTO classroom VALUES ('MyBuilding', 200, 50);
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 5 (6 total, Query took 0.0005 seconds.)

```
SELECT * FROM classroom;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 Filter rows: Search this table | Sort by ke

+ Options

				building	room_number	capacity
<input type="checkbox"/>	Edit	Copy	Delete	MyBuilding	200	50
<input type="checkbox"/>	Edit	Copy	Delete	Packard	101	500
<input type="checkbox"/>	Edit	Copy	Delete	Painter	514	10
<input type="checkbox"/>	Edit	Copy	Delete	Taylor	3128	70
<input type="checkbox"/>	Edit	Copy	Delete	Watson	100	30
<input type="checkbox"/>	Edit	Copy	Delete	Watson	120	50


```
INSERT INTO department VALUES ('MyDepartment', 'MyBuilding', 200000);
```

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

✓ Showing rows 0 - 7 (8 total, Query took 0.0002 seconds.)

```
SELECT * FROM department;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

				dept_name	building	budget
<input type="checkbox"/>	Edit	Copy	Delete	Biology	Watson	90000.00
<input type="checkbox"/>	Edit	Copy	Delete	Comp. Sci.	Taylor	100000.00
<input type="checkbox"/>	Edit	Copy	Delete	Elec. Eng.	Taylor	85000.00
<input type="checkbox"/>	Edit	Copy	Delete	Finance	Painter	120000.00
<input type="checkbox"/>	Edit	Copy	Delete	History	Painter	50000.00
<input type="checkbox"/>	Edit	Copy	Delete	Music	Packard	80000.00
<input type="checkbox"/>	Edit	Copy	Delete	MyDepartment	MyBuilding	200000.00
<input type="checkbox"/>	Edit	Copy	Delete	Physics	Watson	70000.00

```
INSERT INTO course VALUES ('MY-111', 'MyNewCourse', 'MyDepartment', 5);
```

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

✓ Showing rows 0 - 13 (14 total, Query took 0.0001 seconds.)

```
SELECT * FROM course;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

				course_id	title	dept_name	credits
<input type="checkbox"/>	Edit	Copy	Delete	BIO-101	Intro. to Biology	Biology	4
<input type="checkbox"/>	Edit	Copy	Delete	BIO-301	Genetics	Biology	4
<input type="checkbox"/>	Edit	Copy	Delete	BIO-399	Computational Biology	Biology	3
<input type="checkbox"/>	Edit	Copy	Delete	CS-101	Intro. to Computer Science	Comp. Sci.	4
<input type="checkbox"/>	Edit	Copy	Delete	CS-190	Game Design	Comp. Sci.	4
<input type="checkbox"/>	Edit	Copy	Delete	CS-315	Robotics	Comp. Sci.	3
<input type="checkbox"/>	Edit	Copy	Delete	CS-319	Image Processing	Comp. Sci.	3
<input type="checkbox"/>	Edit	Copy	Delete	CS-347	Database System Concepts	Comp. Sci.	3
<input type="checkbox"/>	Edit	Copy	Delete	EE-181	Intro. to Digital Systems	Elec. Eng.	3
<input type="checkbox"/>	Edit	Copy	Delete	FIN-201	Investment Banking	Finance	3
<input type="checkbox"/>	Edit	Copy	Delete	HIS-351	World History	History	3
<input type="checkbox"/>	Edit	Copy	Delete	MU-199	Music Video Production	Music	3
<input type="checkbox"/>	Edit	Copy	Delete	MY-111	MyNewCourse	MyDepartment	5
<input type="checkbox"/>	Edit	Copy	Delete	PHY-101	Physical Principles	Physics	4

Console

```
INSERT INTO teaches VALUES ('00000', 'MY-111', '2', 'Summer', 2019);
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 15 (16 total, Query took 0.0004 seconds.)

```
SELECT * FROM teaches;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐

Show all

Number of rows:

Filter rows:

Sort by key:

+ Options

				ID	course_id	sec_id	semester	year
<input type="checkbox"/>				76766	BIO-101	1	Summer	2009
<input type="checkbox"/>				76766	BIO-301	1	Summer	2010
<input type="checkbox"/>				10101	CS-101	1	Fall	2009
<input type="checkbox"/>				45565	CS-101	1	Spring	2010
<input type="checkbox"/>				83821	CS-190	1	Spring	2009
<input type="checkbox"/>				83821	CS-190	2	Spring	2009
<input type="checkbox"/>				10101	CS-315	1	Spring	2010
<input type="checkbox"/>				45565	CS-319	1	Spring	2010
<input type="checkbox"/>				83821	CS-319	2	Spring	2010
<input type="checkbox"/>				10101	CS-347	1	Fall	2009
<input type="checkbox"/>				98345	EE-181	1	Spring	2009
<input type="checkbox"/>				12121	FIN-201	1	Spring	2010
<input type="checkbox"/>				32343	HIS-351	1	Spring	2010
<input type="checkbox"/>				15151	MU-199	1	Spring	2010
<input type="checkbox"/>				00000	MY-111	2	Summer	2019
<input type="checkbox"/>				22222	PHY-101	1	Fall	2009

✓ 1 row inserted. (Query took 0.0031 seconds.)

```
INSERT INTO instructor VALUES ('00000', 'MyName', 'MyDepartment', 500000);
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 12 (13 total, Query took 0.0005 seconds.)

```
SELECT * FROM instructor;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: | Sort by key: None

+ Options

				ID	name	dept_name	salary
<input type="checkbox"/>		Edit		Copy		Delete	00000 MyName MyDepartment 500000.00
<input type="checkbox"/>		Edit		Copy		Delete	10101 Srinivasan Comp. Sci. 65000.00
<input type="checkbox"/>		Edit		Copy		Delete	12121 Wu Finance 90000.00
<input type="checkbox"/>		Edit		Copy		Delete	15151 Mozart Music 40000.00
<input type="checkbox"/>		Edit		Copy		Delete	22222 Einstein Physics 95000.00
<input type="checkbox"/>		Edit		Copy		Delete	32343 El Said History 60000.00
<input type="checkbox"/>		Edit		Copy		Delete	33456 Gold Physics 87000.00
<input type="checkbox"/>		Edit		Copy		Delete	45565 Katz Comp. Sci. 75000.00
<input type="checkbox"/>		Edit		Copy		Delete	58583 Califieri History 62000.00
<input type="checkbox"/>		Edit		Copy		Delete	76543 Singh Finance 80000.00
<input type="checkbox"/>		Edit		Copy		Delete	76766 Crick Biology 72000.00
<input type="checkbox"/>		Edit		Copy		Delete	83821 Brandt Comp. Sci. 92000.00
<input type="checkbox"/>		Edit		Copy		Delete	98345 Kim Elec. Eng. 80000.00

Console

✓ 1 row inserted. (Query took 0.0035 seconds.)

```
INSERT INTO student VALUES ('11111', 'Rocket', 'MyDepartment', 66);
```

[[Edit inline](#)] [[Edit](#)] [[Create PHP code](#)]

✓ Showing rows 0 - 13 (14 total, Query took 0.0005 seconds.)

```
SELECT * FROM student;
```

☐ [Profiling](#) [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

☐ Show all | Number of rows: Filter rows: Sort by key:

+ Options

← T →						ID	name	dept_name	tot_cred	
<input type="checkbox"/>		Edit		Copy		Delete	00128	Zhang	Comp. Sci.	102
<input type="checkbox"/>		Edit		Copy		Delete	11111	Rocket	MyDepartment	66
<input type="checkbox"/>		Edit		Copy		Delete	12345	Shankar	Comp. Sci.	32
<input type="checkbox"/>		Edit		Copy		Delete	19991	Brandt	History	80
<input type="checkbox"/>		Edit		Copy		Delete	23121	Chavez	Finance	110
<input type="checkbox"/>		Edit		Copy		Delete	44553	Peltier	Physics	56
<input type="checkbox"/>		Edit		Copy		Delete	45678	Levy	Physics	46
<input type="checkbox"/>		Edit		Copy		Delete	54321	Williams	Comp. Sci.	54
<input type="checkbox"/>		Edit		Copy		Delete	55739	Sanchez	Music	38
<input type="checkbox"/>		Edit		Copy		Delete	70557	Snow	Physics	0
<input type="checkbox"/>		Edit		Copy		Delete	76543	Brown	Comp. Sci.	58
<input type="checkbox"/>		Edit		Copy		Delete	76653	Aoi	Elec. Eng.	60
<input type="checkbox"/>		Edit		Copy		Delete	98765	Bourikas	Elec. Eng.	98

✓ 1 row inserted. (Query took 0.0041 seconds.)

```
INSERT INTO takes VALUES ('11111', 'MY-111', '2', 'Summer', 2019, 'B+');
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 22 (23 total, Query took 0.0005 seconds.)

```
SELECT * FROM takes;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: Filter rows: Sort by key:

+ Options

← T →				ID	course_id	sec_id	semester	year	grade
<input type="checkbox"/>	 Edit	 Copy	 Delete	00128	CS-101	1	Fall	2009	
<input type="checkbox"/>	 Edit	 Copy	 Delete	00128	CS-347	1	Fall	2009	
<input type="checkbox"/>	 Edit	 Copy	 Delete	11111	MY-111	2	Summer	2019	B+
<input type="checkbox"/>	 Edit	 Copy	 Delete	12345	CS-101	1	Fall	2009	C
<input type="checkbox"/>	 Edit	 Copy	 Delete	12345	CS-190	2	Spring	2009	A
<input type="checkbox"/>	 Edit	 Copy	 Delete	12345	CS-315	1	Spring	2010	A
<input type="checkbox"/>	 Edit	 Copy	 Delete	12345	CS-347	1	Fall	2009	A
<input type="checkbox"/>	 Edit	 Copy	 Delete	19991	HIS-351	1	Spring	2010	B
<input type="checkbox"/>	 Edit	 Copy	 Delete	23121	FIN-201	1	Spring	2010	C+
<input type="checkbox"/>	 Edit	 Copy	 Delete	44553	PHY-101	1	Fall	2009	B-
<input type="checkbox"/>	 Edit	 Copy	 Delete	45678	CS-101	1	Fall	2009	F
<input type="checkbox"/>	 Edit	 Copy	 Delete	45678	CS-101	1	Spring	2010	B+
<input type="checkbox"/>	 Edit	 Copy	 Delete	45678	CS-319	1	Spring	2010	B
<input type="checkbox"/>	 Edit	 Copy	 Delete	54321	CS-101	1	Fall	2009	A-

- Drag to reorder.
- Click to mark/unmark.
- Double-click to copy column name.

✓ 1 row inserted. (Query took 0.0043 seconds.)

```
INSERT INTO advisor VALUES ('54321', '00000');
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 9 (10 total, Query took 0.0004 seconds.)

```
SELECT * FROM advisor;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all

Number of rows: 25 ▼

Filter rows:

+ Options

← T →				s_ID	i_ID
<input type="checkbox"/>	 Edit	 Copy	 Delete	54321	00000
<input type="checkbox"/>	 Edit	 Copy	 Delete	12345	10101
<input type="checkbox"/>	 Edit	 Copy	 Delete	44553	22222
<input type="checkbox"/>	 Edit	 Copy	 Delete	45678	22222
<input type="checkbox"/>	 Edit	 Copy	 Delete	00128	45565
<input type="checkbox"/>	 Edit	 Copy	 Delete	76543	45565
<input type="checkbox"/>	 Edit	 Copy	 Delete	23121	76543
<input type="checkbox"/>	 Edit	 Copy	 Delete	98988	76766
<input type="checkbox"/>	 Edit	 Copy	 Delete	76653	98345
<input type="checkbox"/>	 Edit	 Copy	 Delete	98765	98345

✓ 1 row inserted. (Query took 0.0032 seconds.)

```
INSERT INTO time_slot VALUES ('A', 'F', 9, 30, 10, 30);
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 20 (21 total, Query took 0.0005 seconds.)

```
SELECT * FROM time_slot;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)








































☐ Show all

Number of rows: 25 ▾

Filter rows:

Sort by key:

+ Options

				time_slot_id	day	start_hr	start_min	end_hr	end_min
<input type="checkbox"/>				A	F	8	0	8	50
<input type="checkbox"/>				A	F	9	30	10	30
<input type="checkbox"/>				A	M	8	0	8	50
<input type="checkbox"/>				A	W	8	0	8	50
<input type="checkbox"/>				B	F	9	0	9	50
<input type="checkbox"/>				B	M	9	0	9	50
<input type="checkbox"/>				B	W	9	0	9	50
<input type="checkbox"/>				C	F	11	0	11	50
<input type="checkbox"/>				C	M	11	0	11	50
<input type="checkbox"/>				C	W	11	0	11	50
<input type="checkbox"/>				D	F	13	0	13	50
<input type="checkbox"/>				D	M	13	0	13	50
<input type="checkbox"/>				D	W	13	0	13	50

✓ 1 row inserted. (Query took 0.0033 seconds.)

```
INSERT INTO section VALUES ('MY-111', '2', 'Summer', 2019, 'MyBuilding', '200', 'A');
```

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✓ Showing rows 0 - 15 (16 total, Query took 0.0003 seconds.)

```
SELECT * FROM section;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: | Filter rows: | Sort by key:

+ Options

← T →			▼	course_id	sec_id	semester	year	building	room_number	time_slot_id			
<input type="checkbox"/>		Edit		Copy		Delete	BIO-101	1	Summer	2009	Painter	514	B
<input type="checkbox"/>		Edit		Copy		Delete	BIO-301	1	Summer	2010	Painter	514	A
<input type="checkbox"/>		Edit		Copy		Delete	CS-101	1	Fall	2009	Packard	101	H
<input type="checkbox"/>		Edit		Copy		Delete	CS-101	1	Spring	2010	Packard	101	F
<input type="checkbox"/>		Edit		Copy		Delete	CS-190	1	Spring	2009	Taylor	3128	E
<input type="checkbox"/>		Edit		Copy		Delete	CS-190	2	Spring	2009	Taylor	3128	A
<input type="checkbox"/>		Edit		Copy		Delete	CS-315	1	Spring	2010	Watson	120	D
<input type="checkbox"/>		Edit		Copy		Delete	CS-319	1	Spring	2010	Watson	100	B
<input type="checkbox"/>		Edit		Copy		Delete	CS-319	2	Spring	2010	Taylor	3128	C
<input type="checkbox"/>		Edit		Copy		Delete	CS-347	1	Fall	2009	Taylor	3128	A
<input type="checkbox"/>		Edit		Copy		Delete	EE-181	1	Spring	2009	Taylor	3128	C
<input type="checkbox"/>		Edit		Copy		Delete	FIN-201	1	Spring	2010	Packard	101	B
<input type="checkbox"/>		Edit		Copy		Delete	HIS-351	1	Spring	2010	Painter	514	C
<input type="checkbox"/>		Edit		Copy		Delete	MU-199	1	Spring	2010	Packard	101	D
<input type="checkbox"/>		Edit		Copy		Delete	MY-111	2	Summer	2019	MyBuilding	200	A

Console

8. (i)

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0008 seconds.)

```
SELECT * FROM `teaches` JOIN course USING (course_id) JOIN instructor USING (ID) WHERE instructor.dept_name = 'Comp. Sci.' AND course.dept_name = 'Civil' AND year = 2009 ORDER BY instructor.name ASC;
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

ID	course_id	sec_id	semester	year	title	dept_name	credits	name	dept_name	salary
----	-----------	--------	----------	------	-------	-----------	---------	------	-----------	--------

Query results operations

[Create view](#)

(ii)

2 rows inserted. (Query took 0.0106 seconds.)

```
INSERT INTO course VALUES ('CS-333', 'Advanced Databases Lab', 'Comp. Sci.', 3), ('CS-303', 'Intro to Databases', 'Comp. Sci.', 6);
```

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

Showing rows 0 - 15 (16 total, Query took 0.0006 seconds.)

```
SELECT * FROM course;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all

Number of rows:

25

Filter rows:

Search this table

Sort by key:

None

+ Options

				course_id	title	dept_name	credits
<input type="checkbox"/>	Edit	Copy	Delete	BIO-101	Intro. to Biology	Biology	4
<input type="checkbox"/>	Edit	Copy	Delete	BIO-301	Genetics	Biology	4
<input type="checkbox"/>	Edit	Copy	Delete	BIO-399	Computational Biology	Biology	3
<input type="checkbox"/>	Edit	Copy	Delete	CS-101	Intro. to Computer Science	Comp. Sci.	4
<input type="checkbox"/>	Edit	Copy	Delete	CS-190	Game Design	Comp. Sci.	4
<input type="checkbox"/>	Edit	Copy	Delete	CS-303	Intro to Databases	Comp. Sci.	6
<input type="checkbox"/>	Edit	Copy	Delete	CS-315	Robotics	Comp. Sci.	3
<input type="checkbox"/>	Edit	Copy	Delete	CS-319	Image Processing	Comp. Sci.	3
<input type="checkbox"/>	Edit	Copy	Delete	CS-333	Advanced Databases Lab	Comp. Sci.	3
<input type="checkbox"/>	Edit	Copy	Delete	CS-347	Database System Concepts	Comp. Sci.	3
<input type="checkbox"/>	Edit	Copy	Delete	EE-181	Intro. to Digital Systems	Elec. Eng.	3
<input type="checkbox"/>	Edit	Copy	Delete	FIN-201	Investment Banking	Finance	3
<input type="checkbox"/>	Edit	Copy	Delete	HIS-351	World History	History	3

(iii)

✔ 0 rows affected. (Query took 0.0004 seconds.)

UPDATE instructor SET salary = salary * 1.1 WHERE dept_name IN (SELECT dept_name FROM department WHERE budget > 900000);

[\[Edit inline \]](#) [\[Edit \]](#) [\[Create PHP code \]](#)

✔ Showing rows 0 - 12 (13 total, Query took 0.0012 seconds.)

SELECT * FROM instructor;

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[E](#)

☐ Show all | Number of rows: 25 ▼ | Filter rows:

+ Options

				ID	name	dept_name	salary
<input type="checkbox"/>		Edit		Copy		Delete	00000 MyName MyDepartment 500000.00
<input type="checkbox"/>		Edit		Copy		Delete	10101 Srinivasan Comp. Sci. 65000.00
<input type="checkbox"/>		Edit		Copy		Delete	12121 Wu Finance 90000.00
<input type="checkbox"/>		Edit		Copy		Delete	15151 Mozart Music 40000.00
<input type="checkbox"/>		Edit		Copy		Delete	22222 Einstein Physics 95000.00
<input type="checkbox"/>		Edit		Copy		Delete	32343 El Said History 60000.00
<input type="checkbox"/>		Edit		Copy		Delete	33456 Gold Physics 87000.00
<input type="checkbox"/>		Edit		Copy		Delete	45565 Katz Comp. Sci. 75000.00
<input type="checkbox"/>		Edit		Copy		Delete	58583 Califieri History 62000.00
<input type="checkbox"/>		Edit		Copy		Delete	76543 Singh Finance 80000.00
<input type="checkbox"/>		Edit		Copy		Delete	76766 Crick Biology 72000.00
<input type="checkbox"/>		Edit		Copy		Delete	83821 Brandt Comp. Sci. 92000.00
<input type="checkbox"/>		Edit		Copy		Delete	98345 Kim Elec. Eng. 80000.00

(iv)

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0014 seconds.)

```
SELECT course_id, title, count(ID) as num_students FROM course JOIN takes USING (course_id) WHERE
dept_name= 'Comp. Sci.' AND year = 2007 AND semester = 'Fall' GROUP BY course_id, title HAVING
num_students > 15 ORDER BY course_id ASC;
```

☐ Profiling [[Edit inline](#)] [[Edit](#)] [[Explain SQL](#)] [[Create PHP code](#)] [[Refresh](#)]

course_id	title	num_students
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Query results operations

 [Create view](#)

