Database Systems
Fall 2025
Homework #1 Simple SQL

This assignment uses the toyu database in MySQL or MariaDB:
https://dcm.uhcl.edu/yue/courses/joinDB/spring2025/notes/toyu/toyu.html.

Provide the MySQL queries for the following queries. Make sure that your queries produce the exact output as shown below. Nevertheless, row orders can be different.

The solution should be put in an *executable* .sql file named h1.sql. Submit your homework through Canvas.

[1] Show the stuId, name, major, and minor of all students who are majoring in CSCI, CINF or ITEC.

```
+--------+-----------------+-------+-------+
| stuId  | name            | major | minor |
+--------+-----------------+-------+-------+
| 100000 | Tony Hawk       | CSCI  | CINF  |
| 100001 | Mary Hawk       | CSCI  | CINF  |
| 100002 | David Hawk      | CSCI  | ITEC  |
| 100003 | Catherine Lim   | ITEC  | CINF  |
| 100004 | Larry Johnson   | ITEC  | NULL  |
| 100005 | Linda Johnson   | CINF  | ENGL  |
| 100006 | Lillian Johnson | CINF  | ITEC  |
+--------+-----------------+-------+-------+
7 rows in set
```

[2] List the names of all departments together with their faculty members' names and ranks of the School 'Science and Engineering' in the following format. You should not use 'CSE' in your query.

```
+---------------+---------------------+----------------------------+
| faculty       | rank                | department                 |
+---------------+---------------------+----------------------------+
| Daniel Kim    | Professor           | Computer Information Systems |
| Andrew Byre   | Associate Professor | Computer Information Systems |
| Paul Smith    | Professor           | Computer Science           |
| Mary Tran     | Associate Professor | Computer Science           |
| David Love    | NULL                | Computer Science           |
| Sharon Mannes | Assistant Professor | Computer Science           |
| Deborah Gump  | Professor           | Information Technology      |
| Benjamin Yu   | Lecturer            | Information Technology      |
+---------------+---------------------+----------------------------+
8 rows in set
```

[3] List the names of students, and their grades of all enrolled 'ENGL', 'CSCI' and 'ITEC' classes, together with the students' grades, semesters and years of the classes, and the course names in the following manner. Note that the result is shown in the ascending order of the student names.

```
+--------+-----------------+--------+--------+--------------------------+----------+------+-------+
| stuId  | student         | rubric | number | title                    | semester | year | grade |
+--------+-----------------+--------+--------+--------------------------+----------+------+-------+
| 100007 | Ben Zico        | ENGL   | 1410   | English I                | Fall     | 2019 | F     |
| 100008 | Bill Ching      | ENGL   | 1410   | English I                | Fall     | 2019 | C-    |
| 100002 | David Hawk      | CSCI   | 5333   | DBMS                     | Fall     | 2019 | B+    |
```

```
| 100002 | David Hawk      | CSCI  | 3333    | Data Structures           | Fall     | 2019 | B-   |
| 100006 | Lillian Johnson | ITEC | 3335    | Database Development       | Fall     | 2019 | A    |
| 100005 | Linda Johnson  | ITEC  | 3335    | Database Development       | Fall     | 2019 | A-   |
| 100005 | Linda Johnson  | ITEC  | 3312    | Introduction to Scripting | Fall     | 2019 | B+   |
| 100001 | Mary Hawk      | CSCI  | 4333    | Design of Database Systems | Fall    | 2019 | A-   |
| 100001 | Mary Hawk      | CSCI  | 3333    | Data Structures           | Fall     | 2019 | NULL |
| 100000 | Tony Hawk      | CSCI  | 5333    | DBMS                      | Fall     | 2019 | B+   |
| 100000 | Tony Hawk      | CSCI  | 4333    | Design of Database Systems | Fall    | 2019 | A    |
| 100000 | Tony Hawk      | CSCI  | 4333    | Design of Database Systems | Spring  | 2020 | D    |
| 100000 | Tony Hawk      | CSCI  | 3333    | Data Structures           | Fall     | 2019 | A    |
+--------+----------------+--------+--------+---------------------------+----------+------+------+
13 rows in set
```

[4] List the ids, names, and their faculty advisor names of every student in the following manner. List only students with a faculty advisor.

```
+--------+----------------+--------------+
| stuId  | student        | advisor      |
+--------+----------------+--------------+
| 100000 | Tony Hawk      | Paul Smith   |
| 100001 | Mary Hawk      | Paul Smith   |
| 100002 | David Hawk     | Mary Tran    |
| 100004 | Larry Johnson  | Deborah Gump |
| 100005 | Linda Johnson  | Daniel Kim   |
| 100006 | Lillian Johnson | Andrew Byre |
| 100009 | Linda King     | Art Allister |
| 100111 | Cathy Johanson | Art Allister |
+--------+----------------+--------------+
8 rows in set
```

[5] List the ids, names and major names of all students with a declared major but no declared minor in the following manner.

```
+--------+---------------+------------------------+
| stuId  | student       | major                  |
+--------+---------------+------------------------+
| 100004 | Larry Johnson | Information Technology |
| 100008 | Bill Ching    | Arts                   |
+--------+---------------+------------------------+
2 rows in set
```