

# Database Systems

## Spring 2026

### Homework #1 Simple SQL

This assignment uses the `toyu` database in MySQL or MariaDB:

<https://dcm.uhcl.edu/yue/courses/joinDB/spring2026/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, unless stated explicit otherwise, *row orders can be different*.

The solution should be put in an *executable* .sql file named `h1.sql`. Submit your homework through Canvas. You may need to add the extension .txt at the end. The TA will download and execute your script .sql file to check whether it produces the expected results.

[1] List the stuId, names and credits of students majoring in CSCI and have 30 to 60 credits (ach) in the following format.

```
+-----+-----+-----+-----+
| stuId | fname | lname | credits |
+-----+-----+-----+-----+
| 100000 | Tony  | Hawk  |      40 |
| 100001 | Mary  | Hawk  |      35 |
+-----+-----+-----+
2 rows in set (0.001 sec)
```

[2] List the student names of minoring in CINF or ITEC with classes (classId) and grades they have taken in the following manner.

```
+-----+-----+-----+-----+
| fname | lname | classId | grade |
+-----+-----+-----+-----+
| Tony  | Hawk  | 10000 | A   |
| Tony  | Hawk  | 10001 | A   |
| Tony  | Hawk  | 10002 | B+  |
| Tony  | Hawk  | 10003 | C   |
| Tony  | Hawk  | 10004 | A-  |
| Tony  | Hawk  | 11001 | D   |
| Mary  | Hawk  | 10000 | NULL |
| Mary  | Hawk  | 10001 | A-  |
| David | Hawk  | 10000 | B-  |
| David | Hawk  | 10002 | B+  |
| David | Hawk  | 10003 | D   |
| Lillian | Johnson | 10004 | C+  |
| Lillian | Johnson | 10005 | A   |
+-----+-----+-----+
13 rows in set (0.001 sec)
```

[3] Repeat (b) but also list the course names in the following manner. Furthermore, if a grade is missing, show an empty string.

```
+-----+-----+-----+-----+-----+
| fname | lname | classId | Course Title           | grade |
+-----+-----+-----+-----+-----+
| Tony  | Hawk  | 10000 | Data Structures          | A   |
| Tony  | Hawk  | 10001 | Design of Database Systems | A   |
| Tony  | Hawk  | 10002 | DBMS                      | B+  |
| Tony  | Hawk  | 10003 | Introduction to Information Systems | C   |
| Tony  | Hawk  | 10004 | Web Application Development | A-  |
| Tony  | Hawk  | 11001 | Design of Database Systems | D   |
+-----+-----+-----+-----+
```

```

| Mary     | Hawk     | 10000 | Data Structures           |      |
| Mary     | Hawk     | 10001 | Design of Database Systems | A-  |
| David    | Hawk     | 10000 | Data Structures           | B-  |
| David    | Hawk     | 10002 | DBMS                   | B+  |
| David    | Hawk     | 10003 | Introduction to Information Systems | D  |
| Lillian  | Johnson | 10004 | Web Application Development | C+  |
| Lillian  | Johnson | 10005 | Database Development      | A   |
+-----+-----+-----+-----+-----+
13 rows in set (0.001 sec)

```

[4] Repeat (c) in the following manner. Add a column to show the name of the instructor.

```

+-----+-----+-----+-----+-----+
| student | classId | Course Title           | instructor | grade |
+-----+-----+-----+-----+-----+
| Tony Hawk | 10000 | Data Structures           | Paul Smith | A   |
| Tony Hawk | 10001 | Design of Database Systems | Paul Smith | A   |
| Tony Hawk | 10002 | DBMS                   | Mary Tran  | B+  |
| Tony Hawk | 10003 | Introduction to Information Systems | Sharon Mannes | C  |
| Tony Hawk | 10004 | Web Application Development | Sharon Mannes | A- |
| Tony Hawk | 11001 | Design of Database Systems | Mary Tran  | D   |
| Mary Hawk  | 10000 | Data Structures           | Paul Smith |      |
| Mary Hawk  | 10001 | Design of Database Systems | Paul Smith | A-  |
| David Hawk | 10000 | Data Structures           | Paul Smith | B-  |
| David Hawk | 10002 | DBMS                   | Mary Tran  | B+  |
| David Hawk | 10003 | Introduction to Information Systems | Sharon Mannes | D  |
| Lillian Johnson | 10004 | Web Application Development | Sharon Mannes | C+  |
| Lillian Johnson | 10005 | Database Development      | Daniel Kim  | A   |
+-----+-----+-----+-----+-----+
13 rows in set (0.002 sec)

```

[5] List all student names, with their major department names and their faculty advisor names in the following manner. Include only students who have [1] a declared minor, [2] a faculty advisor, and [3] enrolled in at least one classes.

```

+-----+-----+-----+
| student | major           | advsior |
+-----+-----+-----+
| Tony Hawk | Computer Science | Paul Smith |
| Mary Hawk  | Computer Science | Paul Smith |
| David Hawk | Computer Science | Mary Tran  |
| Linda Johnson | Computer Information Systems | Daniel Kim |
| Lillian Johnson | Computer Information Systems | Andrew Byre |
+-----+-----+-----+
5 rows in set (0.001 sec)

```