IS5102 Database Management Systems
Exercise class, 12 October 2022 (Week 5)

**Introduction to SQL**

Revise material of Lectures 7-9. In particular, see the final part of the slides for the Lecture 7 slides about working with SQL code.

Download the file https://studres.cs.st-andrews.ac.uk/IS5102/Tutorials/w05.sql and read it with SQLite using one of the methods (SQLite shell or DBeaver). This will create and populate a new database to work with during this exercise class.

In the SQLite shell prompt or in the SQL script tab of DBeaver, enter and execute SQL commands for the following queries. Check the raw data (i.e. INSERT statements in the w05.sql file) to check the correctness of your output.

1.  List student ID, department ID and name for all students. Bonus point (requires lecture 9): sort the output by the department ID and then within each department by the student ID.

2.  Find all distinct IDs of departments offering courses

3.  Find ID and names of all courses worth 30 credits

4.  Find names of CS students having 90 credits

5.  Find ID and names of all students whose ID starts with '8'

6.  For all instructors who are teaching at least one course, find their names and the ID of the course(s) they taught

7.  For all instructors who are teaching at least one course, find their names and the name of the course(s) they taught (hint: use the query from the previous task)

8.  Find names of all students who have less credits than some student in CS

9.  Find names, department ID, and number of taught courses for each instructor teaching more than one course

10. Suggest and answer several own questions about the data

Remark: Questions 5 and 9 require lecture 9. You may skip them in the 1st attempt.