SCC201 Databases: Practical Exercise 1

Getting Started

You should read up on getting a copy of, and running, SQLite – see *Using SQLite*

The Database

This exercise is based on an SQLite database called University containing the following six relations:

Relation
give_course
department
work_on
courses
staff
projects

To confirm your copy of the University database has all six relations, start *SQLite* from a *Command Prompt* by typing:

```
sqlite3.exe University.db
```

Once the session has started get the list of tables by entering the command:

```
.tables
```

To find the structure of the relations in this database enter the command:

```
.schema
```

Keep a safe copy of the queries you develop as you will need them later.

Exercises

Write SQL statements that will accomplish the following objectives.

1. Queries involving one relation.
   a. what is the title of the course with code 361?
   b. what position and qualifications does Davies have?

NOTE: when a query specification includes a "constant" value such as Davies, your query should make direct use of this value. In other words, in this example, your query should reference the "s_name" attribute. **You should not use your knowledge of the tabular data** to replace this with a reference to "s_id"; in other words, do not look up the table in order to use short cuts.

2. Queries involving two relations.
   a. what is the name of the department that Bear works for?
   b. what are the course codes of courses offered by the Computing department?

3. Queries involving three relations.
   a. What are the titles of course given by Mariani?
   b. What are the names and initials of the staff who work on the COMIC project?

   (Present these results in alphabetical order by name)

4. Using the `INSERT INTO ... VALUES ...` command,
   a. add a row to the Department relation regarding the Sociology department, with a location at Cartmel college and a code of SOCIO.
   b. add a row to Staff regarding J. Hughes, who is a Professor and has a PhD, an S_ID of JH, and works for Sociology.
   c. add a row to Work_on for J.Hughes working on COMIC from 1991 to 1994.
   d. re-run your query for 3 (b).

5. More complex queries
   a. what are the names of people who started work on COMIC between 1990 and 1992?
   b. what is the total amount of funding, and the average amount of funding, of all projects?

6. List staff names and the number of projects they have worked on.

7. Delete the 3 new records you added in Q4, above.