

## CSCU9B3 Practicals 8 & 9: More SQL

### Computing Science, University of Stirling

#### More practice with searches

Consider a university that is split into faculties. Each faculty has a name, a description and a number of departments (Computing, Biology, etc.). Each department has a name and a telephone number. Each department runs a number of courses. Each course has a code which is just an integer (1,2,3,4) and a name.

1. Draw the ER diagram for the situation described above.
2. Download the file **university.sql** from the module Canvas web site (Practicals page) and put it in your own file space.
3. Use the Import tab in phpMyAdmin to import the file **university.sql**. This will create three tables for you: Course, Department and Faculty. (Hopefully these will match the ER diagram you drew. If not, work out why.)
4. Define appropriate primary and foreign keys for these tables (where there are none).

<b>Checkpoint 9: show your ER diagram, plus your tables with keys set in phpMyAdmin.</b>
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5. Write and execute single SQL queries to answer each of the following questions:
  - a. List all the Faculties (by name and description) in the university.
  - b. What is the phone number of the Computing department?
  - c. List all the courses (code and title) taught in the Physics department.
  - d. In which course (code and title) would you learn about brains?
  - e. List the titles of all the courses run by the Faculty of Humanities.
  - f. Which faculty teaches the course called "Subjunctives"?
  - g. How many courses are run by the Spanish department? (Don't list them and then count, your query should return just the count).
  - h. How many courses are run by the Faculty of Science?
  - i. Which Faculty runs the most courses?

<b>Checkpoint 10: show your results for searches d, f and h and the SQL you used in an editor.</b>
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