

Lab Sheet 1

SELECT-FROM-WHERE Queries

For this lab we will use `students` database, reproduced below for ease of reference. This database is available in the file named `students.sqlite`, on webpage https://www.cs.ucc.ie/~kieran/sqlite_dbs.html.

Download this (by right clicking and using "save link as"). Store it somewhere accessible. It's best to create a "database" folder for this module and create subfolders "lab1", "lab2" to house the materials for the various labs.

Don't tamper with the contents of the database by adding, removing or modifying its contents. If you do modify the database accidentally, just remove it and download a fresh copy.

You do not need to submit your work. It is however recommended that you save it for future reference. The VSCode environment has a save-file option.

students						
<i>id_number</i>	<i>first_name</i>	<i>last_name</i>	<i>date_of_birth</i>	<i>hometown</i>	<i>course</i>	<i>points</i>
112345678	Aoife	Ahern	1993-01-25	Cork	ck401	500
112467389	Barry	Barry	1980-06-30	Tralee	ck402	450
112356489	Ciara	Callaghan	1993-03-14	Limerick	ck401	425
112986347	Declan	Duffy	1993-11-03	Cork	ck407	550
112561728	Eimear	Early	1993-07-18	Thurles	ck406	475
112836467	Fionn	Fitzgerald	1994-06-13	Bandon	ck405	485

Write complete SQL queries for each of the tasks listed below, bearing the following points in mind.

- Try to complete as many as you can, though some of the later ones rely on material we may not have seen yet.
- Adhere to the conventions discussed in class regarding capitalization.
- Check each answer to verify that it produces precisely the right result. Bear in mind that a query, say to list all students with at least 450 points, should produce the correct result for any possible set of students' details that might appear in the table (consistent with the given table structure), not just the specific values in the instance given above.

These are the tasks:

1. List all the students in the table; include all the columns in the result.
2. List the names (first name, followed by last name) of all the students in the table.
3. List the names of all the students in the table; list these in increasing order of their points (lowest first, highest last).
4. List the names of all the students in the table; list them in decreasing order of their dates of birth (oldest first, youngest last).

5. List all the distinct home-towns that appear in the table; note that each town should appear only once however often it features in the table.
6. List the names of all students with at least 450 points.
7. List the names of all students with exactly 525 points.
8. List the names of all students who do not have exactly 525 points.
9. List the names of all students with between 400 and 500 points.
10. List the names of all the students who come from Cork.
11. List the names of all the students born on or before 1 January 1994.
12. List the names of all the students who were less than 20 years old on 1 October 2012.
13. List the names of all the students born on 25 December 1994.
14. List the details of all the students named **Ciara**.
15. List the details of all the students named **ciara**.
16. List the details of all the students whose surname or first name is **Barry**.
17. List the details of all the students named **O'Kelly**.
18. List the names of all the students born in 1994.
19. List the names and home-towns of all female students.
20. List the details of all students enrolled in either **ck401** or **ck402**.
21. List the details of all students that have at least 450 points and are from Cork.
22. List the details of all students that have at least 450 points and are not from Cork.
23. List the details of all students whose last name precedes **Cuddihy** alphabetically.
24. List the details of all students whose name precedes **Harry Callaghan** alphabetically (under the convention that names are ordered by last name and then by first name).
25. List the details of all the students whose surname begins with the letter 'H'.
26. List names and points of all students with at least 450 points; arrange the result in decreasing order by first name; label the columns of the result using **Surname** (for last name), **Given Name(s)** (for other name(s)) and **CAO Points** (for points).