

Lab Sheet 4

Simple Joins

These exercises are based on the **friends** database containing tables **persons** and **likes** (previously known as **favourite_foods**). The SQL file required to set this database up are in the DBs section of the module webpage.

The following problems involve the use of SQL's LIKE string matching feature. You may wish to Google this to refresh your memory on how this works.

1. List all the persons in the DB with first names beginning with the letter 'A'
2. List all the persons in the DB with first names that end with the letter 'A'
3. List all the persons in the DB whose first names contain the letter 'A'
4. List all the persons in the DB whose first names contains exactly five letters
5. List all the persons in the DB whose address contains the word "street"
6. List all the foods that contain a single space
7. List all the foods that contain the pair of letters **te**

The following problem involve the use of joins.

1. List the complete join of the **persons** and **likes** tables.
2. Refine the above so that each row from **persons** appears adjacent only those rows from **likes** that relate to the same individual i.e. list each individual together with all his/her favourite foods.
3. List Aoife Ahern's favourite foods.
4. List the names and favourite foods of all those from County Cork.
5. List all the distinct foods favoured by females.
6. List the names of all individuals who like pizza.
7. List the (distinct) home-towns of those who like beer.
8. List the complete cross join of the **likes** table with itself.
9. Refine the above so that each row from **likes** appears adjacent only to other rows from **likes** that relate to the same individual i.e. list food pairs favoured by some individual.
10. List the id numbers of those who like both pizza and nutella.
11. List the id numbers of those who like either pizza or nutella (or both).
12. List the names of those who live in Cork and who like beer.

13. List the names of those who like both pizza and nutella.
14. List the names of those who like either pizza or nutella (or both).
15. List the complete cross join of the **persons** table with itself.
16. Refine the above so that each person pair appears only once in the output.
17. List the names of any individuals who share the same date of birth.
18. List the names of any individuals who share the same birthday. ¹
19. List for each food the number of individuals who count that food among their favourites.
20. List the names of those who do *not* like beer.
21. List those that like at least two of pizza, beer, nutella.
22. List all distinct pairs of individuals that have at least one food in common.
23. List for each county and each food the number of individuals in that county that like that food.
24. List the number of beer lovers county by county in descending order of popularity.
25. List the name of the youngest person in the database.

¹Hint: Use substring to extract the day and month components.