

## Contents

|                                |   |
|--------------------------------|---|
| MySQL Questions .....          | 2 |
| Question A (MySQLQA.txt) ..... | 2 |
| Question B (MySQLQB.txt) ..... | 3 |
| Question C (MySQLQC.txt) ..... | 4 |
| Question D (MySQLQD.txt) ..... | 5 |
| Neo4j Questions .....          | 6 |
| Question A (Neo4jQA.txt) ..... | 6 |
| Question B (Neo4jQB.txt) ..... | 7 |
| Question C (Neo4jQC.txt) ..... | 8 |
| Question D (Neo4jQD.txt) ..... | 9 |

## MySQL Questions

Import the MySQL database as described in section 4.1 MySQL, of the Final Project Specification and write queries to satisfy the following.

Write only the exact MySQL command for each question into the appropriate file.

### Question A (MySQLQA.txt)

Show the number of directors (as “Number of Directors”) from each country (as “Country”) that have directed Oscar winning films.

The results should be sorted alphabetical by “Country”.

| Number of Directors | Country        |
|---------------------|----------------|
| 1                   | Canada         |
| 1                   | Japan          |
| 1                   | Mexico         |
| 2                   | New Zealand    |
| 1                   | Taiwan         |
| 1                   | United Kingdom |
| 21                  | United States  |

7 rows in set (0.00 sec)

Figure 1 Example of output required for Question A

Question B (MySQLQB.txt)

Show the names of the studios (as "Studio") that released films that "Tom Cruise" has acted in.

The results should be sorted alphabetical by "Studio".

```
+-----+  
| Studio |  
+-----+  
| Paramount Pictures |  
| Warner Bros. Pictures |  
+-----+  
2 rows in set (0.00 sec)
```

Figure 2 Example of output required for Question B

### Question C (MySQLQC.txt)

Show the name of each actor born between 1960 and 1965 inclusive (as "Actor"), and the genre (as "Genre") and film name (as "Film") of films they acted in.

The results should be sorted alphabetical by "Actor", within that alphabetically by "Genre" and within that alphabetically by "Film".

| Actor              | Genre    | Film                              |
|--------------------|----------|-----------------------------------|
| Andy Serkis        | Other    | King Kong                         |
| Brad Pitt          | Other    | Ocean's Eleven                    |
| Brad Pitt          | Other    | Troy                              |
| Brad Pitt          | Romantic | Mr. and Mrs. Smith                |
| Chris Rock         | Other    | Bee Movie                         |
| Chris Rock         | Other    | Lethal Weapon 4                   |
| Don Cheadle        | Other    | Ocean's Eleven                    |
| George Clooney     | Drama    | The Perfect Storm                 |
| George Clooney     | Other    | Ocean's Eleven                    |
| Hiroiyuki Sanada   | Other    | Sunshine                          |
| Hiroiyuki Sanada   | Other    | The Last Samurai                  |
| Hugo Weaving       | Other    | The Matrix Reloaded               |
| Hugo Weaving       | Other    | The Matrix Revolutions            |
| Hugo Weaving       | Other    | Transformers                      |
| Jet Li             | Other    | Lethal Weapon 4                   |
| John C. Reilly     | Drama    | The Perfect Storm                 |
| Johnny Depp        | Muscial  | Charlie and the Chocolate Factory |
| Keanu Reeves       | Other    | The Matrix Reloaded               |
| Keanu Reeves       | Other    | The Matrix Revolutions            |
| Laurence Fishburne | Other    | Mission: Impossible III           |
| Laurence Fishburne | Other    | The Matrix Reloaded               |
| Laurence Fishburne | Other    | The Matrix Revolutions            |
| Matthew Broderick  | Other    | Bee Movie                         |

Figure 3 Example of output required for Question C

#### Question D (MySQLQD.txt)

Show the film name (as "Film") for all films where the director is from the "United Kingdom", and a column entitled "Cast" that contains:

- "Small" if the cast is less than 5
- "Medium" if the cast is between 5 and 9
- "Large" if the cast is 10 or greater.

The results should be sorted alphabetical by "Film".

| Film                                | Cast   |
|-------------------------------------|--------|
| Harry Potter and the Goblet of Fire | Medium |
| Sunshine                            | Small  |
| Tomorrow Never Dies                 | Medium |
| Waterworld                          | Small  |

4 rows in set (0.00 sec)

Figure 4 Example of output required for Question D

## Neo4j Questions

Import the Neo4j database as described in section 4.2 Neo4j, of the Final Project Specification and write queries to satisfy the following.

Write only the exact Neo4j command for each question into the appropriate file.

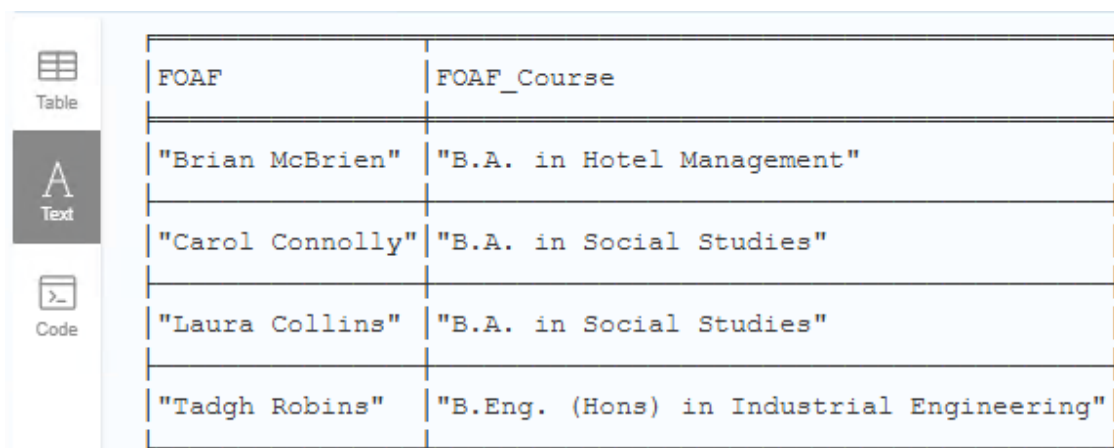
### Question A (Neo4jQA.txt)

Return all friend-of-a-friends of student with the sid TUS-L017 (as "FOAF") and the name of the course the friend-of-a-friend is studying (as "FOAF\_Course").

The results should be sorted alphabetical by "FOAF", and within that alphabetically by "FOAF\_Course"

(NOTE: A friend-of-a-friend is someone who is friends with a friend of a person, but not with the friend themselves.

In the following example, "Tadgh Robins" is a FOAF of "Fiona Murphy", but "Clodagh Murphy" is not a FOAF of "Fiona Murphy"; because "Clodagh Murphy" has a direct friendship with "Fiona Murphy", but "Tadgh Robins" does not).



The image shows a screenshot of a Neo4j query result interface. On the left, there is a sidebar with three icons: a table icon labeled 'Table', a text icon labeled 'Text', and a code icon labeled 'Code'. The 'Table' icon is selected. The main area displays a table with two columns: 'FOAF' and 'FOAF\_Course'. The table contains five rows of data, sorted alphabetically by the 'FOAF' column.

| FOAF             | FOAF_Course                               |
|------------------|---|
| "Brian McBrien"  | "B.A. in Hotel Management"                |
| "Carol Connolly" | "B.A. in Social Studies"                  |
| "Laura Collins"  | "B.A. in Social Studies"                  |
| "Tadgh Robins"   | "B.Eng. (Hons) in Industrial Engineering" |

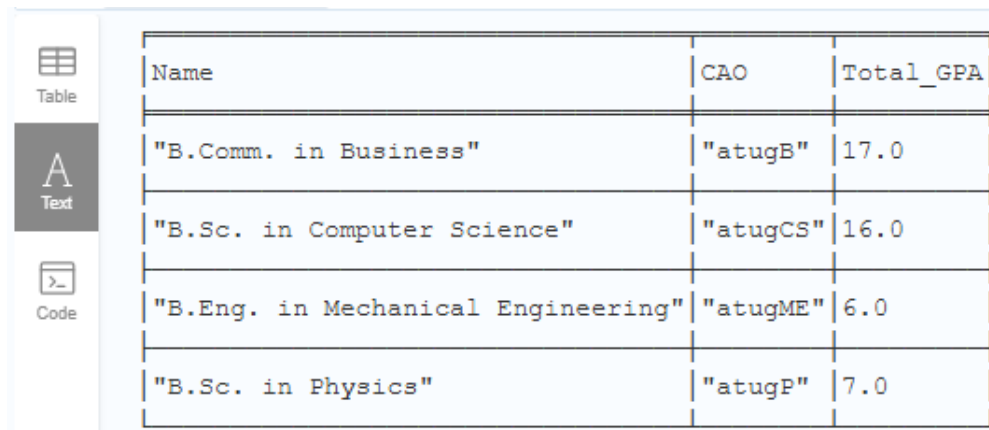
Figure 5 Example of output required for Question A

Question B (Neo4jQB.txt)

Return the course name (as “Name”), the course cao (as “CAO”), and the total gpa for students studying that course (as “Total\_GPA”), for all courses with students studying them in the Location Galway.

“Total\_GPA” should be rounded to the nearest whole number.

The results should be sorted alphabetical by “CAO”.



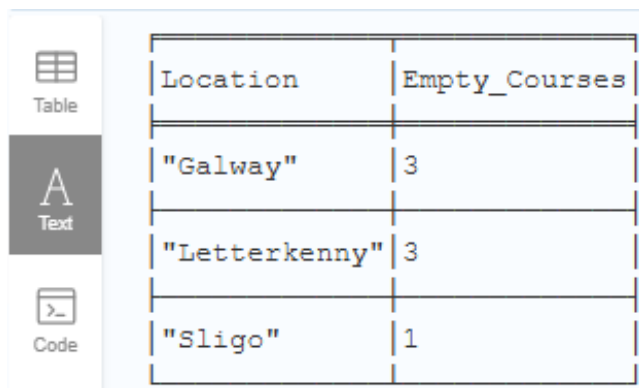
| Name                               | CAO      | Total_GPA |
|------------------------------------|----------|-----------|
| "B.Comm. in Business"              | "atugB"  | 17.0      |
| "B.Sc. in Computer Science"        | "atugCS" | 16.0      |
| "B.Eng. in Mechanical Engineering" | "atugME" | 6.0       |
| "B.Sc. in Physics"                 | "atugP"  | 7.0       |

Figure 6 Example of output required for Question B

Question C (Neo4jQC.txt)

Return the location (as "Location") and the number of courses with no students studying them (as "Empty\_Courses") for each location in the Institution "Atlantic Technological University"

Results should be returned in descending "Empty\_Courses" order, and within that alphabetically by "Location".



| Location      | Empty_Courses |
|---------------|---------------|
| "Galway"      | 3             |
| "Letterkenny" | 3             |
| "Sligo"       | 1             |

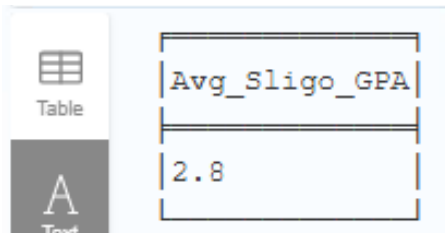
Figure 7 Example of output required for Question C



Question D (Neo4jQD.txt)

Return the average gpa (as "Avg\_Sligo\_GPA") for students in the Location "Sligo".

"Avg\_Sligo\_GPA" should be rounded to 1 decimal place e.g. 1.22 should be rounded to 1.2, and 1.25 should be rounded to 1.3.



| Avg_Sligo_GPA |
|---------------|
| 2.8           |

Figure 8 Example of output required for Question D