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Database Web services

Instructor: Dr.Peter Baumann

2021

Abstract

- Working queries;
- Query execution logs captured from your interaction.

1 Queries

1. **admission application for year 2021**

```
MariaDB [group5]> SELECT COUNT(A_id) AS applicants_2021 FROM Admin_application WHERE Year_ = 2021;
+-----------------+
| applicants_2021 |
+-----------------+
|              11 |
+-----------------+
1 row in set (0.000 sec)

MariaDB [group5]>
```

2. **Number of top 25 universities by country**

```
shishir@shishir-MS-7C37: ~
3 rows in set (0,001 sec)

MariaDB [group5]> SELECT DISTINCT UNI.Country, COUNT(UNI.U_id) AS Count
    -> FROM UNI
    -> WHERE UNI.World_R <= 25
    -> GROUP BY UNI.Country;
+---------+-------+
| Country | Count |
+---------+-------+
| Germany |     2 |
| India   |     1 |
| USA     |     2 |
+---------+-------+
3 rows in set (0,000 sec)

MariaDB [group5]>
```

3. **Number of professors by their countries who have more than two collaborators in their publication**

```
MariaDB [group5]> SELECT DISTINCT PD.Country, COUNT(DISTINCT PD.PN_id) AS Number_of_Professors
    -> FROM Professor_details PD, Professor_publishing PP
    -> WHERE PD.PN_id = PP.PN_id
    -> GROUP BY PD.Country
    -> HAVING COUNT(PP.colab_id) > 2;
+-------------+----------------------+
| Country     | Number_of_Professors |
+-------------+----------------------+
| Germany     |                    1 |
| India       |                    1 |
| Switzerland |                    1 |
+-------------+----------------------+
3 rows in set (0.001 sec)
```

4. **Select the tests where the test is TOEFL and toefl is the highest ranking test**

```
MariaDB [group5]> SELECT COUNT(t_id) AS top_german_language_tests FROM Language_Tests WHERE Type_of_Test = "Language TOEFL" AND Test_ranking <=100;
+---------------------------+
| top_german_language_tests |
+---------------------------+
|                        10 |
+---------------------------+
1 row in set (0.000 sec)
```

5. **Select the universities where they have open job and admission application for mathematics department**

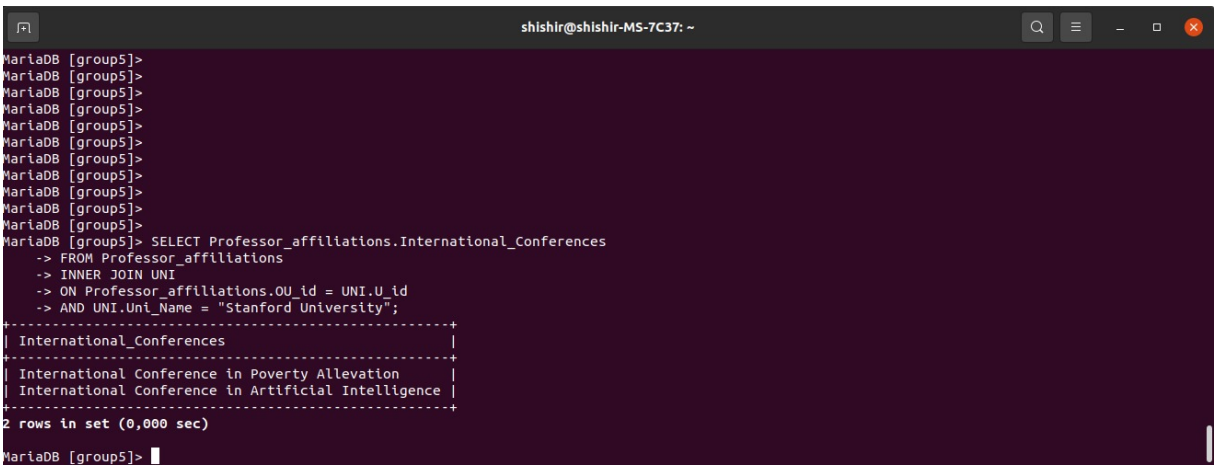
```
MariaDB [group5]> SELECT COUNT(U_id) FROM Admin_application Job_application WHERE Department = "mathematics";
+-------------+
| COUNT(U_id) |
+-------------+
|           6 |
+-------------+
1 row in set (0.000 sec)
```

6. **Those students(in our database) who collaborated with professors in their papers**

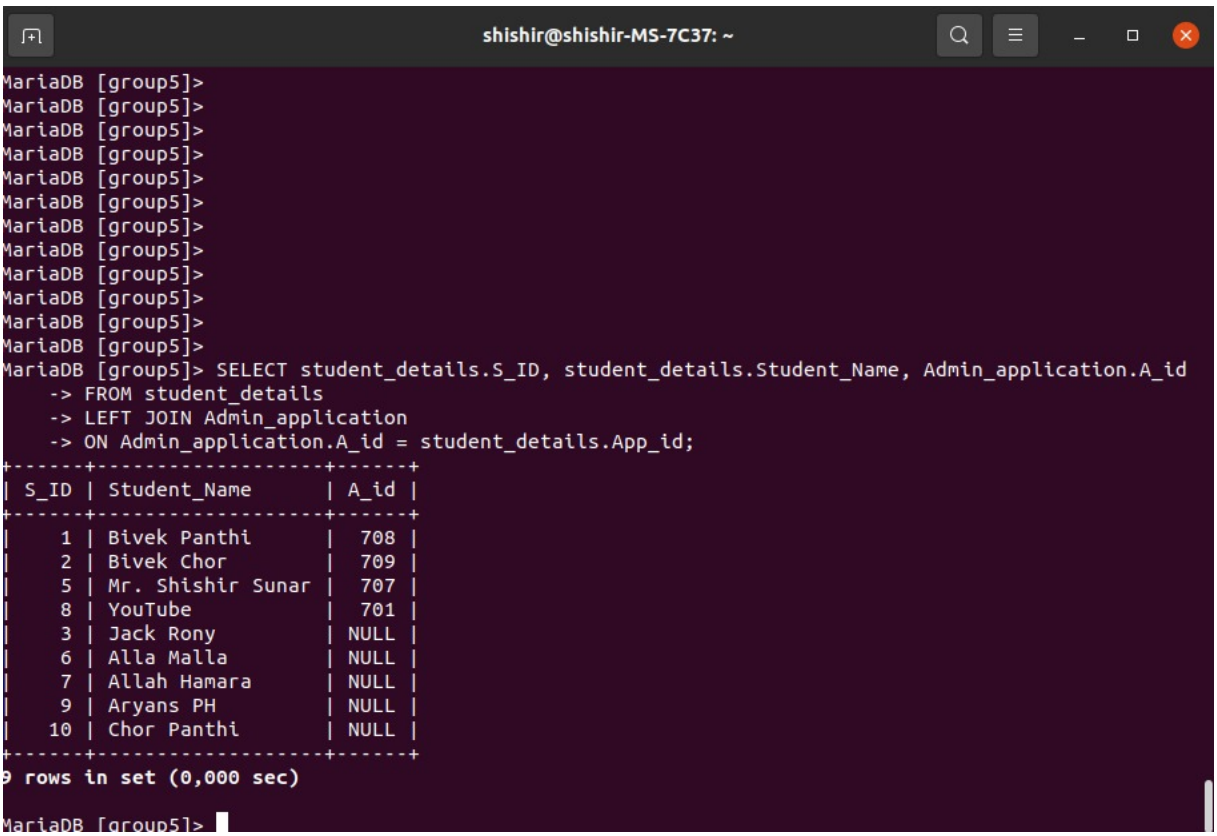
```
shishir@shishir-MS-7C37: ~
MariaDB [group5]>
MariaDB [group5]>
MariaDB [group5]>
MariaDB [group5]>
MariaDB [group5]>
MariaDB [group5]>
MariaDB [group5]> SELECT Professor_publishing.collaborators_in_the_paper, Professor_publishing.Papers_name, student_details.S_ID
    -> FROM Professor_publishing
    -> INNER JOIN student_details
    -> ON Professor_publishing.colab_id = student_details.S_ID;
+----------------------------+-----------------------------------------------------------------------+------+
| collaborators_in_the_paper | Papers_name                                                           | S_ID |
+----------------------------+-----------------------------------------------------------------------+------+
| D. Misev                   | Array databases: concepts, standards, implementations.                |    1 |
| V. Merticariu              | Array databases: concepts, standards, implementations.                |    2 |
| B.H. Pham                  | Array databases: concepts, standards, implementations.                |    3 |
| Abhijit Banerjee           | Poor economics: A radical rethinking of the way to fight global poverty |    4 |
| R. Khurana                 | Recognition of inference pattern using Generative Adverserial Networks |    8 |
| Max Quang                  | Recognition of inference pattern using Generative Adverserial Networks |    9 |
| H. Dmytrivec               | Recognition of inference pattern using Generative Adverserial Networks |   10 |
| R Lal                      | Model for c-axis resistivity of cuprate superconductors               |    5 |
| RL Hota                    | Model for c-axis resistivity of cuprate superconductors               |    6 |
| SK Joshi                   | Model for c-axis resistivity of cuprate superconductors               |    7 |
+----------------------------+-----------------------------------------------------------------------+------+
10 rows in set (0,001 sec)

MariaDB [group5]>
```

7. **Name of the international conferences done by Stanford University professors**

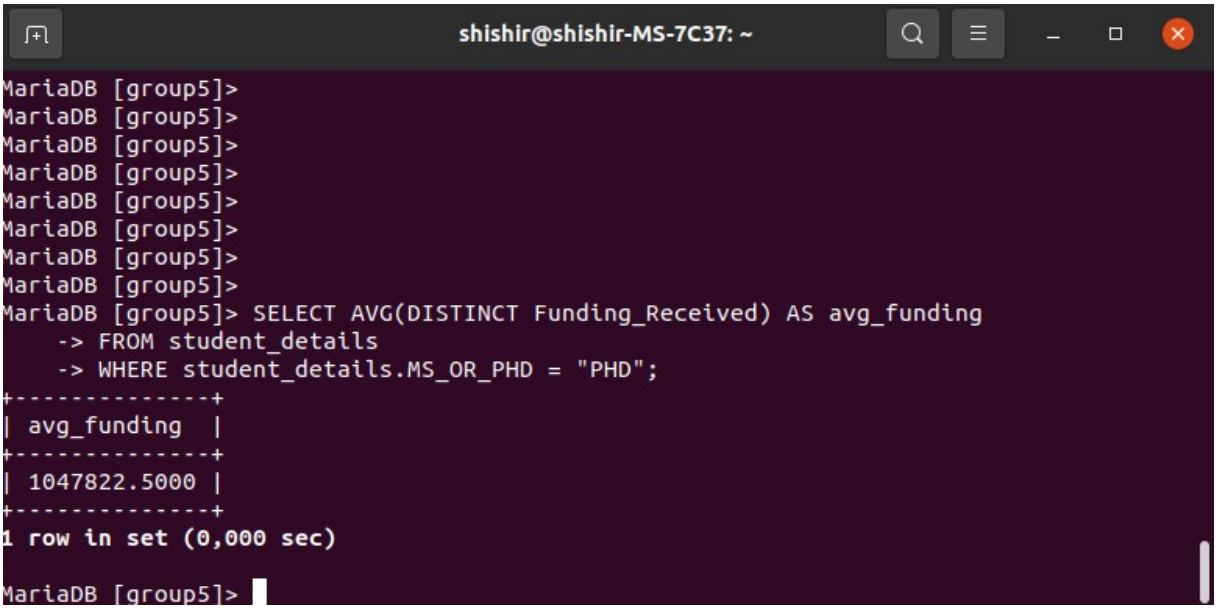


8. **All students and their application (NULL value in A_id means he or she did not apply to any universities in our dataset)**

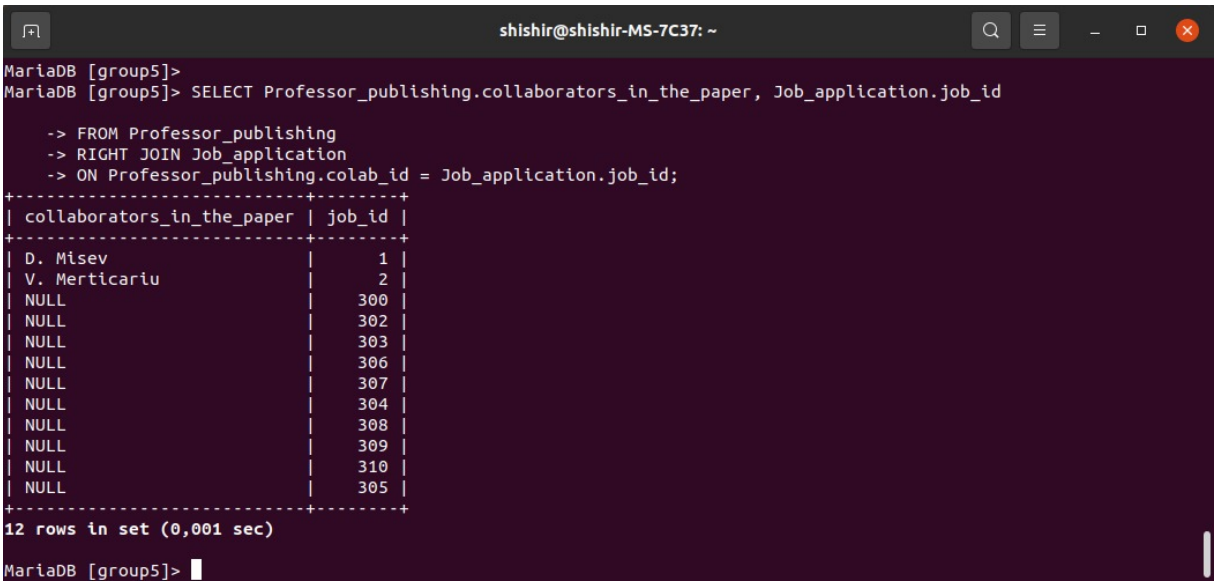


9. **counts number of distinct applicants to MIT in the year 2021**

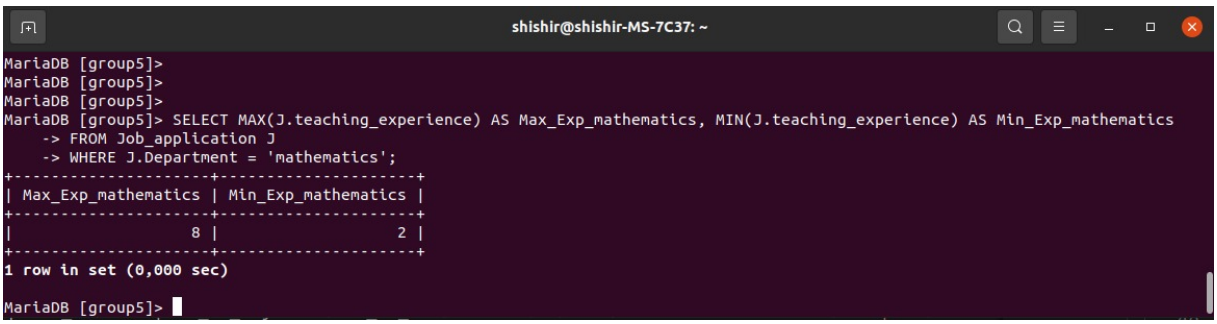
10. **Finding average funding received by PHD students**



11. **Taking all job applicants with or without (NULL) research with professor**



12. **Showing the applicants with maximum and minimum teaching experience in math department applications**


shishir@shishir-MS-7C37: ~
MariaDB [group5]>
MariaDB [group5]>
MariaDB [group5]>
MariaDB [group5]> SELECT MAX(J.teaching_experience) AS Max_Exp_mathematics, MIN(J.teaching_experience) AS Min_Exp_mathematics
-> FROM Job_application J
-> WHERE J.Department = 'mathematics';
| Max_Exp_mathematics | Min_Exp_mathematics |
| 8 | 2 |
1 row in set (0,000 sec)
MariaDB [group5]>