



Anish Ghosh & Bivek Panthi & Aryans Rathi & Shishir Sunar

## **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 Adversarial Networks | 8 |
| Max Quang | Recognition of inference pattern using Generative Adversarial Networks | 9 |
| H. Dmytriv | Recognition of inference pattern using Generative Adversarial 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

```
shishlr@shishlr-MS-7C37: ~  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]> SELECT Professor_affiliations.International_Conferences  
-> FROM Professor_affiliations  
-> INNER JOIN UNI  
-> ON Professor_affiliations.OU_id = UNI.U_id  
-> AND UNI.Uni_Name = "Stanford University";  
+-----+  
| International_Conferences |  
+-----+  
| International Conference in Poverty Allevation |  
| International Conference in Artificial Intelligence |  
+-----+  
2 rows in set (0,000 sec)  
MariaDB [group5]>
```

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

```
shishir@shishir-MS-7C37: ~  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]> SELECT student_details.S_ID, student_details.Student_Name, Admin_application.A_id  
-> FROM student_details  
-> LEFT JOIN Admin_application  
-> ON Admin_application.A_id = student_details.App_id;  
+-----+  
| S_ID | Student_Name      | A_id |  
+-----+  
| 1    | Bivek Panthi      | 708  |  
| 2    | Bivek Chor        | 709  |  
| 5    | Mr. Shishir Sunar | 707  |  
| 8    | YouTube           | 701  |  
| 3    | Jack Rony         | NULL |  
| 6    | Alla Malla        | NULL |  
| 7    | Allah Hamara      | NULL |  
| 9    | Aryans PH         | NULL |  
| 10   | Chor Panthi       | NULL |  
+-----+  
9 rows in set (0,000 sec)  
MariaDB [group5]>
```

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

```
shishir@shishir-MS-7C37: ~  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]> SELECT COUNT( DISTINCT Admin_application.A_id) AS MIT2021  
-> FROM Admin_application  
-> WHERE Admin_application.U_id = 1 AND Admin_application.Year_ = 2021;  
+-----+  
| MIT2021 |  
+-----+  
| 1       |  
+-----+  
1 row in set (0,000 sec)  
MariaDB [group5]>
```

10. Finding average funding received by PHD students

```
shishir@shishir-MS-7C37: ~  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]>  
MariaDB [group5]> SELECT AVG(DISTINCT Funding_Received) AS avg_funding  
-> FROM student_details  
-> WHERE student_details.MS_OR_PHD = "PHD";  
+-----+  
| avg_funding |  
+-----+  
| 1047822.5000 |  
+-----+  
1 row in set (0,000 sec)  
MariaDB [group5]>
```

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

```
shishir@shishir-MS-7C37: ~  
MariaDB [group5]>  
MariaDB [group5]> SELECT Professor_publishing.collaborators_in_the_paper, Job_application.job_id  
-> FROM Professor_publishing  
-> RIGHT JOIN Job_application  
-> ON Professor_publishing.colab_id = Job_application.job_id;  
+-----+-----+  
| collaborators_in_the_paper | job_id |  
+-----+-----+  
| D. Misev | 1 |  
| V. Merticariu | 2 |  
| NULL | 300 |  
| NULL | 302 |  
| NULL | 303 |  
| NULL | 306 |  
| NULL | 307 |  
| NULL | 304 |  
| NULL | 308 |  
| NULL | 309 |  
| NULL | 310 |  
| NULL | 305 |  
+-----+-----+  
12 rows in set (0,001 sec)  
MariaDB [group5]>
```

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]> 
```