

## DBMS Lab Quiz

Name: Vrushank G

SRN: PES1UG20CS516

Section: I

### Lab Quiz

Creation and population of PES1UG20CS516\_LabQuiz database

Setting environment for using XAMPP for Windows.

ASUS@DESKTOP-842748Q c:\xampp

# mysql -u root

Welcome to the MariaDB monitor. Commands end with ; or \g.

Your MariaDB connection id is 8

Server version: 10.4.24-MariaDB mariadb.org binary distribution

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database PES1UG20CS516\_LabQuiz;

Query OK, 1 row affected (0.006 sec)

MariaDB [(none)]> use PES1UG20CS516\_LabQuiz

Database changed

MariaDB [PES1UG20CS516\_LabQuiz]> source D:\RISHI\SEM5\DBMS\PES1UG20CS516\_LabQuiz\BloodBank\_Management.sql

Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.000 sec)

Query OK, 0 rows affected (0.013 sec)

Query OK, 4 rows affected (0.011 sec)

Records: 4 Duplicates: 0 Warnings: 0

Query OK, 0 rows affected (0.012 sec)

Query OK, 8 rows affected (0.005 sec)

Records: 8 Duplicates: 0 Warnings: 0

Query OK, 0 rows affected (0.011 sec)

Query OK, 11 rows affected (0.004 sec)

Records: 11 Duplicates: 0 Warnings: 0

Query OK, 0 rows affected (0.011 sec)

Query OK, 15 rows affected (0.007 sec)

Records: 15 Duplicates: 0 Warnings: 0

Query OK, 0 rows affected (0.012 sec)

Query OK, 4 rows affected (0.005 sec)

Records: 4 Duplicates: 0 Warnings: 0

Query OK, 0 rows affected (0.011 sec)

Query OK, 9 rows affected (0.005 sec)

Records: 9 Duplicates: 0 Warnings: 0

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```
MariaDB [PES1UG20CS516_LabQuiz]> show tables;
+-----+
| Tables_in_pes1ug20cs516_labquiz |
+-----+
| blood_bank                        |
| blood_patient                    |
| blood_units                       |
| donor                            |
| hospital                         |
| hospital_request                  |
| patient                          |
| patient_request                   |
| registration_team                 |
| requests                         |
| technical_analyst                 |
| technical_analyst_blood           |
+-----+
12 rows in set (0.001 sec)
```

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SET No 2:

4. List the name and IDs of the patients who did not get the exact blood group as their own. Also display the blood group of blood unit and their actual blood group

```
SELECT patient.patient_name, patient.patient_id, requests.blood_group AS  
bloodgroup_unit , patient.blood_group AS actual_bloodgroup  
FROM patient  
INNER JOIN patient_request  
ON patient.patient_id = patient_request.patient_id  
INNER JOIN requests  
ON patient_request.request_id = requests.request_id  
WHERE patient.blood_group != requests.blood_group;
```

```
MariaDB [PES1UG20CS516_LabQuiz]> SELECT patient.patient_name, patient.patient_id, requests.blood_group AS bloodgroup_unit , patient.blood_group AS actual_bloodgroup  
-> FROM patient  
-> INNER JOIN patient_request  
-> ON patient.patient_id = patient_request.patient_id  
-> INNER JOIN requests  
-> ON patient_request.request_id = requests.request_id  
-> WHERE patient.blood_group != requests.blood_group;
```

patient_name	patient_id	bloodgroup_unit	actual_bloodgroup
Kavya	P0010	A	AB+
Kavya	P0010	B-	AB+
Kavya	P0010	O+	AB+
Anushree	P0011	O+	A+
Tirthankar	P0015	A+	O+
Naina	P0016	O-	AB-
Susheel	P0017	AB+	O-
Vishal	P0020	O+	AB+
Vishal	P0020	A+	AB+
Vinayak	P0024	O-	A+

10 rows in set (0.001 sec)

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5. Write a query to display the number of donors and the number of request for particular blood groups in the ascending order of requests

```
SELECT * FROM
(SELECT blood_group, COUNT(d_id) AS no_of_donors
FROM donor
GROUP BY blood_group) AS t1
NATURAL JOIN
(SELECT blood_group, COUNT(request_id) AS no_of_requests
FROM requests
GROUP BY blood_group) AS t2
ORDER BY no_of_requests;
```

```
MariaDB [PES1UG20CS516_LabQuiz]> SELECT * FROM
-> (SELECT blood_group, COUNT(d_id) AS no_of_donors
-> FROM donor
-> GROUP BY blood_group) as t1
-> NATURAL JOIN
-> (SELECT blood_group, COUNT(request_id) AS no_of_requests
-> FROM requests
-> GROUP BY blood_group) as t2
-> ORDER BY no_of_requests;
```

blood_group	no_of_donors	no_of_requests
B-	1	1
A-	2	2
AB-	1	2
O-	1	2
A+	2	2
AB+	4	4
O+	3	5

7 rows in set (0.001 sec)

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6. Write a function to set the health status of a donor. If the donor has some associated disease set health status to 'Fair', otherwise to 'Good'

```
DELIMITER $$
CREATE OR REPLACE FUNCTION health_status(disease VARCHAR(50))
RETURNS VARCHAR(10)
DETERMINISTIC
BEGIN
    DECLARE SET_MSG VARCHAR(10);
    IF disease = "NIL" OR disease = "Nil" THEN
        SET SET_MSG = "Good";
    ELSE
        SET SET_MSG = "Fair";
    END IF;
    RETURN SET_MSG;
END; $$
DELIMITER ;

SELECT d_id, d_name, d_surname, d_disease, health_status(d_disease) as
health_status FROM donor;
```

```
MariaDB [PES1UG20CS516_LabQuiz]> DELIMITER $$
MariaDB [PES1UG20CS516_LabQuiz]> CREATE OR REPLACE FUNCTION health_status(disease VARCHAR(50))
-> RETURNS VARCHAR(10)
-> DETERMINISTIC
-> BEGIN
->     DECLARE SET_MSG VARCHAR(10);
->     IF disease = "NIL" OR disease = "Nil" THEN
->         SET SET_MSG = "Good";
->     ELSE
->         SET SET_MSG = "Fair";
->     END IF;
->     RETURN SET_MSG;
-> END; $$
Query OK, 0 rows affected (0.004 sec)

MariaDB [PES1UG20CS516_LabQuiz]> DELIMITER ;
MariaDB [PES1UG20CS516_LabQuiz]> SELECT d_id, d_name, d_surname, d_disease, health_status(d_disease) as health_status FROM donor;
+-----+-----+-----+-----+-----+
| d_id | d_name | d_surname | d_disease | health_status |
+-----+-----+-----+-----+-----+
| D0020 | Vishnu | Mustaine | NIL       | Good          |
| D0021 | Sheeba | Lee Roth | NIL       | Good          |
| D0022 | Allina | Van Halen | Diabetes  | Fair          |
| D0023 | Abhibav | Medidi | BP        | Fair          |
| D0024 | Aaron  | Chapman | NIL       | Good          |
| D0025 | Anirudh | Michael | NIL       | Good          |
| D0026 | Dev    | Daniel  | Diabetes  | Fair          |
| D0027 | Nisar  | Mayer   | Anemia    | Fair          |
| D0028 | Joshua | Hudson  | Nil       | Good          |
| D0029 | Shrey  | Rose    | Nil       | Good          |
| D0030 | Varad  | Ulrich  | Nil       | Good          |
| D0031 | Shashank | Hamett | Nil       | Good          |
| D0032 | Nevil  | Sheeran | Nil       | Good          |
| D0033 | Nishok | Jackson | Nil       | Good          |
| D0034 | Aditi  | Wonder  | Nil       | Good          |
+-----+-----+-----+-----+-----+
15 rows in set (0.001 sec)
```