

DBMS: LAB 10

TRIGGERS AND DCL

University Fest Management System

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SRN: PES1UG22CS022.

DATE: 15-10-2024.

```
mysql> prompt PES1UG22CS022-> ;  
PROMPT set to 'PES1UG22CS022-> '  
PES1UG22CS022->
```

TASK 1:

Question 1:

```
PES1UG22CS022-> DELIMITER $$  
PES1UG22CS022->  
PES1UG22CS022-> CREATE TRIGGER allocate_event_day  
-> AFTER INSERT ON registration  
-> FOR EACH ROW  
-> BEGIN  
->     DECLARE participant_count INT;  
->     DECLARE last_event_date DATE;  
->  
->     -- Step 1: Count the number of participants for the newly registered event  
->     SELECT COUNT(*) INTO participant_count  
->     FROM registration  
->     WHERE event_id = NEW.event_id;  
->  
->     -- Step 2: If participant count exceeds 10, allocate an extra day  
->     IF participant_count > 10 THEN  
->         -- Get the last conduction date for this event  
->         SELECT MAX(date_of_conduction) INTO last_event_date  
->         FROM event_conduction  
->         WHERE event_id = NEW.event_id;  
->  
->         -- Step 3: Insert the next day (1 day after the last event conduction date)  
->         INSERT INTO event_conduction (event_id, date_of_conduction)  
->         VALUES (NEW.event_id, DATE_ADD(last_event_date, INTERVAL 1 DAY));  
->     END IF;  
-> END $$  
Query OK, 0 rows affected (0.03 sec)  
  
PES1UG22CS022->  
PES1UG22CS022-> DELIMITER ;  
-> ^C  
PES1UG22CS022-> DELIMITER ;  
PES1UG22CS022-> INSERT INTO REGISTRATION VALUES ('E11', 'P1009', 'R61');  
Query OK, 1 row affected (0.09 sec)
```

```
PES1UG22CS022-> INSERT INTO REGISTRATION VALUES ('E12', 'P1001', 'R61');
Query OK, 1 row affected (0.02 sec)
```

```
PES1UG22CS022-> INSERT INTO REGISTRATION VALUES ('E17', 'P1001', 'R60');
Query OK, 1 row affected (0.01 sec)
```

```
PES1UG22CS022-> |
```

BEFORE INSERTION:

```
PES1UG22CS022-> select * from event_conduction ;
```

event_id	date_of_conduction
E1	2023-04-15
E10	2022-04-17
E11	2022-04-18
E12	2022-04-19
E13	2022-04-15
E14	2022-04-16
E15	2022-04-17
E16	2022-04-18
E17	2022-04-19
E17	2022-04-20
E18	2022-04-15
E19	2022-04-16
E2	2023-04-16
E20	2022-04-17
E21	2022-04-18
E22	2022-04-19
E23	2022-04-15
E24	2022-04-16
E25	2021-04-15
E26	2021-04-16
E27	2021-04-17
E29	2021-04-19
E3	2023-04-17
E30	2021-04-15
E31	2021-04-16
E32	2021-04-17
E32	2021-04-18
E4	2023-04-18
E5	2023-04-19
E6	2023-04-15
E7	2023-04-16
E8	2023-04-17
E9	2022-04-15
E9	2022-04-16

```
34 rows in set (0.00 sec)
```

```
PES1UG22CS022->
```

AFTER INSERTION:

```
PES1UG22CS022-> select * from event_conduction ;
```

event_id	date_of_conduction
E1	2023-04-15
E10	2022-04-17
E11	2022-04-18
E11	2022-04-19
E12	2022-04-19
E13	2022-04-15
E14	2022-04-16
E15	2022-04-17
E16	2022-04-18
E17	2022-04-19
E17	2022-04-20
E17	2022-04-21
E18	2022-04-15
E19	2022-04-16
E2	2023-04-16
E20	2022-04-17
E21	2022-04-18
E22	2022-04-19
E23	2022-04-15
E24	2022-04-16
E25	2021-04-15
E26	2021-04-16
E27	2021-04-17
E29	2021-04-19
E3	2023-04-17
E30	2021-04-15
E31	2021-04-16
E32	2021-04-17
E32	2021-04-18
E4	2023-04-18
E5	2023-04-19
E6	2023-04-15
E7	2023-04-16
E8	2023-04-17
E9	2022-04-15
E9	2022-04-16

```
36 rows in set (0.00 sec)
```

Question 2:

```
PES1UG22CS022->
PES1UG22CS022-> DELIMITER $$
PES1UG22CS022->
PES1UG22CS022-> CREATE TRIGGER validate_purchase
-> BEFORE INSERT ON PURCHASED
-> FOR EACH ROW
-> BEGIN
->   DECLARE available_quantity INT;
->
->   SELECT total_quantity INTO available_quantity
->   FROM STALL_ITEMS
->   WHERE stall_id = NEW.stall_id AND item_name = NEW.item_name;
->
->   IF available_quantity IS NULL OR NEW.quantity > available_quantity THEN
->     SIGNAL SQLSTATE '45000'
->     SET MESSAGE_TEXT = 'Not enough items present in stall';
->   ELSE
->     UPDATE STALL_ITEMS
->     SET total_quantity = total_quantity - NEW.quantity
->     WHERE stall_id = NEW.stall_id AND item_name = NEW.item_name;
->   END IF;
-> END $$
ERROR 1046 (3D000): No database selected
PES1UG22CS022->
PES1UG22CS022-> DELIMITER ;
PES1UG22CS022-> use fest_database;
Database changed
PES1UG22CS022-> DELIMITER $$
```

```
PES1UG22CS022->INSERT INTO PURCHASED VALUES('P1001', 'S1', 'Caprese Salad', '2022-04-19 10:00:15', 9) ;
Query OK, 1 row affected (0.09 sec)
```

```
PES1UG22CS022->INSERT INTO purchased VALUES('P1001','S1','Classic Caesar Salad', '2022-04-19 10:00:15',49);
ERROR 1644 (45000): Not enough items present in stall
PES1UG22CS022->
```

Question 3:

```
PES1UG22CS022-> DELIMITER $$
PES1UG22CS022->
PES1UG22CS022-> CREATE PROCEDURE GetTopRevenueTeams (IN p_fest_id VARCHAR(10))
-> BEGIN
->   SELECT t.team_id, SUM(e.price) * COUNT(r.SRN) AS total_revenue
->   FROM TEAM t
->   JOIN EVENT e ON t.team_id = e.team_id
->   JOIN REGISTRATION r ON e.event_id = r.event_id
->   WHERE t.fest_id = p_fest_id -- Adjusted to use t.fest_id
->   GROUP BY t.team_id
->   ORDER BY total_revenue DESC
->   LIMIT 1;
-> END $$
Query OK, 0 rows affected (0.03 sec)

PES1UG22CS022->
PES1UG22CS022-> DELIMITER ;
PES1UG22CS022-> call GetTopRevenueTeams('F101');
+-----+-----+
| team_id | total_revenue |
+-----+-----+
| T4      | 415500.00     |
+-----+-----+
1 row in set (0.05 sec)

Query OK, 0 rows affected (0.05 sec)

PES1UG22CS022->
```

TASK 2:

```
PES1UG22CS022-> select user from mysql.user;
+-----+
| user                |
+-----+
| mysql.infoschema    |
| mysql.session       |
| mysql.sys           |
| root                |
+-----+
4 rows in set (0.00 sec)
```

Question 1:

```
Grants for participant_role%
GRANT USAGE ON *.* TO 'participant_role'@'%'
GRANT SELECT ON 'fest_database'.'event' TO 'participant_role'@'%'
GRANT SELECT ON 'fest_database'.'fest' TO 'participant_role'@'%'
GRANT SELECT ON 'fest_database'.'stall' TO 'participant_role'@'%'
GRANT SELECT ON 'fest_database'.'team' TO 'participant_role'@'%'
5 rows in set (0.00 sec)

PES1UG22CS022->SHOW GRANTS FOR team_coordinator_role;
Grants for team_coordinator_role%
GRANT USAGE ON *.* TO 'team_coordinator_role'@'%'
GRANT SELECT, INSERT, UPDATE, DELETE ON 'fest_database'.'event' TO 'team_coordinator_role'@'%'
GRANT SELECT, INSERT, UPDATE, DELETE ON 'fest_database'.'team' TO 'team_coordinator_role'@'%'
3 rows in set (0.00 sec)

PES1UG22CS022->SHOW GRANTS FOR stall_coordinator_role;
Grants for stall_coordinator_role%
GRANT USAGE ON *.* TO 'stall_coordinator_role'@'%'
GRANT SELECT, INSERT, UPDATE, DELETE ON 'fest_database'.'item' TO 'stall_coordinator_role'@'%'
GRANT SELECT, INSERT, UPDATE, DELETE ON 'fest_database'.'purchased' TO 'stall_coordinator_role'@'%'
GRANT SELECT, INSERT, UPDATE, DELETE ON 'fest_database'.'stall_items' TO 'stall_coordinator_role'@'%'
GRANT SELECT, INSERT, UPDATE, DELETE ON 'fest_database'.'stall' TO 'stall_coordinator_role'@'%'
5 rows in set (0.00 sec)

PES1UG22CS022->SHOW GRANTS FOR fest_coordinator_role;
Grants for fest_coordinator_role%
GRANT USAGE ON *.* TO 'fest_coordinator_role'@'%'
GRANT ALL PRIVILEGES ON 'fest_database'.* TO 'fest_coordinator_role'@'%'
2 rows in set (0.00 sec)

PES1UG22CS022->
```

Question 2:

```
PES1UG22CS022-> CREATE USER Alex@localhost;
Query OK, 0 rows affected (0.01 sec)

PES1UG22CS022-> CREATE USER Emily@localhost;
Query OK, 0 rows affected (0.00 sec)

PES1UG22CS022-> CREATE USER Andres@localhost IDENTIFIED BY 'teamcoord';
Query OK, 0 rows affected (0.01 sec)

PES1UG22CS022-> CREATE USER Bella@localhost IDENTIFIED BY 'stallcoord';
Query OK, 0 rows affected (0.01 sec)

PES1UG22CS022-> CREATE USER Diana@localhost IDENTIFIED BY 'festcoord';
Query OK, 0 rows affected (0.01 sec)

PES1UG22CS022-> CREATE USER Derik@localhost;
Query OK, 0 rows affected (0.00 sec)

PES1UG22CS022-> GRANT participant TO Alex@localhost;
Query OK, 0 rows affected (0.00 sec)

PES1UG22CS022-> GRANT participant TO Emily@localhost;
Query OK, 0 rows affected (0.00 sec)

PES1UG22CS022-> GRANT team_coordinator TO Andres@localhost;
Query OK, 0 rows affected (0.00 sec)

PES1UG22CS022-> GRANT stall_coordinator TO Bella@localhost;
Query OK, 0 rows affected (0.00 sec)

PES1UG22CS022-> GRANT fest_coordinator TO Diana@localhost;
Query OK, 0 rows affected (0.02 sec)

PES1UG22CS022-> show grants for 'Bella@localhost';
```

```
ERROR 1141 (42000): There is no such grant defined for user 'participants' on host '%'
PES1UG22CS022-> show grants for Bella@localhost;
```

```
+-----+
| Grants for Bella@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Bella'@'localhost' |
| GRANT 'stall_coordinator'@'%' TO 'Bella'@'localhost' |
+-----+
2 rows in set (0.00 sec)
```

```
PES1UG22CS022-> show grants for Emily@localhost;
```

```
+-----+
| Grants for Emily@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Emily'@'localhost' |
| GRANT 'participant'@'%' TO 'Emily'@'localhost' |
+-----+
2 rows in set (0.00 sec)
```

```
PES1UG22CS022-> show grants for Andres@localhost;
```

```
+-----+
| Grants for Andres@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Andres'@'localhost' |
| GRANT 'team_coordinator'@'%' TO 'Andres'@'localhost' |
+-----+
2 rows in set (0.00 sec)
```

```
PES1UG22CS022-> SHOW GRANTS FOR 'Andres';
```

```
ERROR 1141 (42000): There is no such grant defined for user 'Andres' on host '%'
```

```
PES1UG22CS022-> SHOW GRANTS FOR Diana@localhost;
```

```
+-----+
| Grants for Diana@localhost |
+-----+
| GRANT USAGE ON *.* TO 'Diana'@'localhost' |
| GRANT 'fest_coordinator'@'%' TO 'Diana'@'localhost' |
+-----+
2 rows in set (0.00 sec)
```