

## **DBMS LAB 6:**

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TASK 1-

Q1)

Before:

ItemID	ItemName	ItemType	Price	Quantity	StallID
I1	Mushroom Risotto	Veg	150.00	25	S1
I2	Paneer Wrap	Veg	100.00	20	S1
I3	Fish Tacos	Non-Veg	200.00	15	S6

3 rows in set (0.00 sec)

Command:

```
sneha>DELIMITER $$
sneha>
sneha>CREATE TRIGGER reduce_item_quantity
-> AFTER INSERT ON Purchase
-> FOR EACH ROW
-> BEGIN
->     UPDATE Item
->     SET Quantity = Quantity - NEW.Quantity
->     WHERE ItemID = NEW.ItemID;
-> END$$
Query OK, 0 rows affected (0.02 sec)
```

After:

```
sneha>SELECT * FROM Item WHERE ItemID = 'I1';
```

ItemID	ItemName	ItemType	Price	Quantity	StallID
I1	Mushroom Risotto	Veg	150.00	25	S1

```
1 row in set (0.00 sec)
```

Q2)

Before:

```
sneha>DESCRIBE PURCHASE;
```

Field	Type	Null	Key	Default	Extra
PurchaseID	varchar(10)	NO	PRI	NULL	
SRN	varchar(20)	YES	MUL	NULL	
ItemID	varchar(10)	YES	MUL	NULL	
Quantity	int	YES		NULL	
PurchaseTime	datetime	YES		NULL	

```
5 rows in set (0.03 sec)
```

Command:

```
sneha>DELIMITER $$
sneha>CREATE TRIGGER check_qty_limit
-> BEFORE INSERT ON Purchase
-> FOR EACH ROW
-> BEGIN
->     IF NEW.Quantity > 5 THEN
->         SIGNAL SQLSTATE '45000'
->         SET MESSAGE_TEXT = 'Cannot purchase more than 5 units in one
transaction!';
->     END IF;
-> END$$
Query OK, 0 rows affected (0.03 sec)
```

After:

```
sneha>INSERT INTO Purchase (PurchaseID, SRN, ItemID, Quantity, PurchaseTime)
-> VALUES ('PU11', 'P1002', 'I2', 6, NOW());
ERROR 1644 (45000): Cannot purchase more than 5 units in one transaction!
```

## TASK 2

Q1)

Before:

```
sneha>DESCRIBE Purchase;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| PurchaseID | varchar(10)   | NO   | PRI | NULL    |       |
| SRN        | varchar(20)   | YES  | MUL | NULL    |       |
| ItemID     | varchar(10)   | YES  | MUL | NULL    |       |
| Quantity   | int           | YES  |     | NULL    |       |
| PurchaseTime | datetime      | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.00 sec)

sneha>DESCRIBE Item;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ItemID     | varchar(10)   | NO   | PRI | NULL    |       |
| ItemName    | varchar(100)  | NO   |     | NULL    |       |
| ItemType   | enum('Veg','Non-Veg') | YES |     | NULL    |       |
| Price      | decimal(8,2)  | YES  |     | NULL    |       |
| Quantity   | int           | YES  |     | NULL    |       |
| StallID    | varchar(10)   | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

sneha>DESCRIBE Stall;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| StallID    | varchar(10)   | NO   | PRI | NULL    |       |
| StallName  | varchar(100)  | NO   |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Command:

```
sneha>DELIMITER $$
sneha>CREATE PROCEDURE GetStallSales(IN p_StallID VARCHAR(10))
-> BEGIN
->     SELECT s.StallName,
->           SUM(i.Price * p.Quantity) AS TotalRevenue
->     FROM Purchase p
->     JOIN Item i ON p.ItemID = i.ItemID
->     JOIN Stall s ON i.StallID = s.StallID
->     WHERE s.StallID = p_StallID
->     GROUP BY s.StallName;
-> END$$
Query OK, 0 rows affected (0.04 sec)

sneha>DELIMITER ;
```

After:

```
sneha>CALL GetStallSales('S1');
+-----+-----+
| StallName | TotalRevenue |
+-----+-----+
| Foodies Corner | 400.00 |
+-----+-----+
1 row in set (0.02 sec)

Query OK, 0 rows affected (0.02 sec)
```

Q2)

Before:

```
sneha>DESCRIBE Registration;
```

Field	Type	Null	Key	Default	Extra
RegID	varchar(10)	NO	PRI	NULL	
SRN	varchar(20)	YES	MUL	NULL	
EventID	varchar(10)	YES	MUL	NULL	

3 rows in set (0.00 sec)

Command:

```
sneha>CREATE PROCEDURE RegisterParticipant(  
->    IN p_RegID VARCHAR(10),  
->    IN p_SRN VARCHAR(20),  
->    IN p_EventID VARCHAR(10)  
-> )  
-> BEGIN  
->     INSERT INTO Registration (RegID, SRN, EventID)  
->     VALUES (p_RegID, p_SRN, p_EventID);  
-> END$$
```

Query OK, 0 rows affected (0.02 sec)

After:

```
sneha>CALL RegisterParticipant('R100', 'P1002', 'E3');  
Query OK, 1 row affected (0.07 sec)
```

```
sneha>SELECT * FROM Registration WHERE RegID = 'R100';
```

RegID	SRN	EventID
R100	P1002	E3

1 row in set (0.00 sec)

TASK 3

Q1)

Before:

```
sneha>DESCRIBE Event;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| EventID    | varchar(10)   | NO   | PRI | NULL     |       |
| EventName  | varchar(100)  | NO   |     | NULL     |       |
| TeamID     | varchar(10)   | YES  |     | NULL     |       |
| Venue_Block | varchar(50)   | YES  |     | NULL     |       |
| Venue_Floor | int           | YES  |     | NULL     |       |
| Venue_Room  | int           | YES  |     | NULL     |       |
| Price      | decimal(8,2)  | YES  |     | NULL     |       |
| EventDate  | date          | YES  |     | NULL     |       |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

Command:

```
sneha>CREATE FUNCTION GetEventCost(p_EventID VARCHAR(10))
-> RETURNS DECIMAL(8,2)
-> DETERMINISTIC
-> BEGIN
->     DECLARE eventPrice DECIMAL(8,2);
->     SELECT Price INTO eventPrice
->     FROM Event
->     WHERE EventID = p_EventID;
->     RETURN eventPrice;
-> END$$
Query OK, 0 rows affected (0.02 sec)
```

After:

```
sneha>SELECT GetEventCost('E2') AS EventCost;
+-----+
| EventCost |
+-----+
|    300.00 |
+-----+
1 row in set (0.01 sec)
```

Q2)

Before:

```
sneha>DESCRIBE Purchase;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| PurchaseID | varchar(10)    | NO   | PRI | NULL     |       |
| SRN        | varchar(20)    | YES  | MUL | NULL     |       |
| ItemID     | varchar(10)    | YES  | MUL | NULL     |       |
| Quantity   | int            | YES  |     | NULL     |       |
| PurchaseTime | datetime       | YES  |     | NULL     |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)

sneha>DESCRIBE Item;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ItemID     | varchar(10)    | NO   | PRI | NULL     |       |
| ItemName    | varchar(100)   | NO   |     | NULL     |       |
| ItemType    | enum('Veg', 'Non-Veg') | YES  |     | NULL     |       |
| Price       | decimal(8,2)   | YES  |     | NULL     |       |
| Quantity    | int            | YES  |     | NULL     |       |
| StallID    | varchar(10)    | YES  | MUL | NULL     |       |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

Command:

```
sneha>CREATE FUNCTION GetParticipantPurchaseTotal(p_SRN VARCHAR(
20))
-> RETURNS DECIMAL(10,2)
-> DETERMINISTIC
-> BEGIN
->     DECLARE totalSpent DECIMAL(10,2);
->     SELECT SUM(i.Price * p.Quantity) INTO totalSpent
->     FROM Purchase p
->     JOIN Item i ON p.ItemID = i.ItemID
->     WHERE p.SRN = p_SRN;
->     RETURN IFNULL(totalSpent, 0);
-> END$$
Query OK, 0 rows affected (0.02 sec)

sneha>DELIMITER ;
```

After:

```
sneha>SELECT GetParticipantPurchaseTotal('P1001') AS TotalSpent
-> ;
+-----+
| TotalSpent |
+-----+
|      300.00 |
+-----+
1 row in set (0.01 sec)
```