Title: Food Ordering And Delivery Management System

Course: DATABASE MANAGEMENT SYSTEM (UE23CS351A) **Project Level:** Experiential Learning: Level 2 (Mini Project)

Team Members:

Student 1: SIRI S ARADHYA — PES1UG23CS906

Student 2: YOGITHA A S — PES1UG23CS901

Institution: PES University

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1. DESCRIPTION

Abstract: This project implements a Food Ordering System using MySQL as backend and Streamlit as the frontend. The system supports user registration/login (hashed passwords), restaurant browsing, menu management, cart functionality, order placement (stored procedure), automatic inventory updates (triggers), payment tracking, and user reviews. The application demonstrates normalized relational design, stored procedures, triggers, functions, and analytical queries—meeting the DBMS mini-project requirements.

2. User Requirement Specification

2.1 Purpose of the Project

The purpose of this project is to design and develop a Food Ordering System that enables users to browse restaurants, view menus, place orders, and provide feedback, while allowing administrators to manage restaurants, menu items, and customer orders efficiently.

This project aims to simulate the functionality of popular food delivery platforms like Swiggy or Zomato, providing an interactive web-based platform integrated with a relational database. It demonstrates how database concepts such as normalization, referential integrity, stored procedures, and triggers can be implemented effectively in a real-world business scenario.

The system provides an end-to-end food ordering experience — from restaurant browsing and cart management to order placement and payment tracking — all supported by robust backend database operations.

2.2 Scope of the Project

The scope of this project covers both user-facing and administrator-facing functionalities.

For Users:

The system allows registration and secure login using password hashing, browsing multiple restaurants and their menus, adding desired food items to a cart, placing orders, selecting payment methods, and submitting reviews with ratings.

For Administrators:

The system provides a dashboard to manage restaurants, update or delete menu items, track order progress, and update order statuses.

The project ensures data consistency and automation using triggers, procedures, and functions. It demonstrates complete CRUD (Create, Read, Update, Delete) operations across all entities and enforces business rules such as inventory control and order status history.

This application is scalable and can be extended further with delivery tracking, user analytics, and coupon-based discount systems, making it a comprehensive database-driven business solution.

2.3 Detailed Description of the Project

The Food Ordering System is implemented using MySQL as the backend database and Streamlit (Python) as the frontend interface.

It integrates multiple interrelated tables that represent real-world entities such as users, restaurants, menu items, orders, payments, and reviews.

- The database schema includes tables: Users, Restaurants, Menu, Orders, Order_Items, Cart, Payments, Coupons, Delivery_Partners, Reviews, and Order_Status_History.
- The database is normalized and uses foreign key constraints to maintain referential integrity among entities.
- Stored Procedures automate key operations such as order placement and review submission (PlaceOrderFromCart, AddReview).
- Functions such as GetOrderTotal and GetRestaurantAvgRating help compute derived data for business insights.
- Triggers handle automatic updates adjusting stock levels after each order, recalculating totals, and maintaining a detailed log of order status changes.
- The Streamlit frontend provides a graphical user interface with interactive features for both customers and administrators. Users can browse restaurants with images, view menu categories, and interactively manage their cart, while admins can view and update data seamlessly.

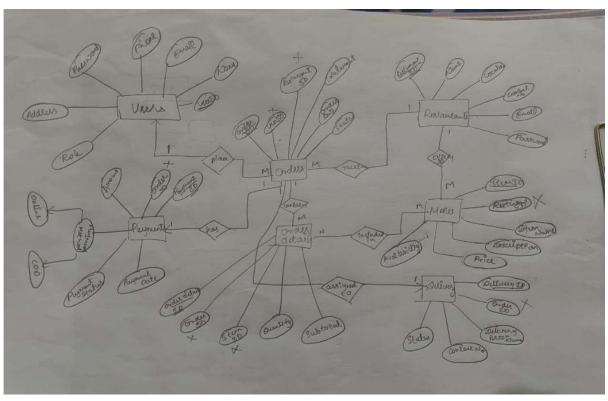
The system thus demonstrates a complete data flow from front-end operations to backend database transactions, ensuring accuracy, security, and ease of management.

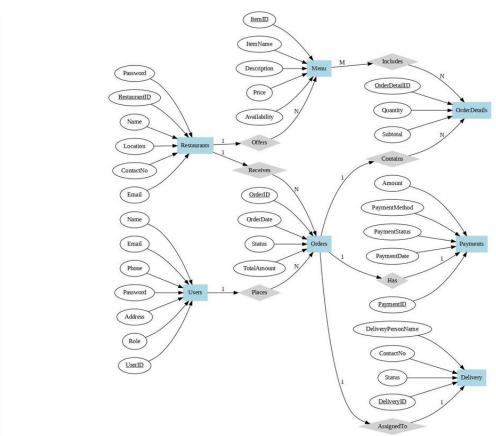
2.4 Functional Requirements

SI. No.	System Functionality	Description
1	User Registration & Login	Allows users to sign up with name, email, and password. Passwords are hashed using SHA-256 for secure authentication.
2	Restaurant Browsing	Displays a list of restaurants with details and images. Users can select a restaurant to view its menu.
3	Menu Display & Filtering	Fetches menu items dynamically from the database and categorizes them (e.g., Pizza, Drinks, Desserts).
4	Add to Cart	Enables users to add menu items to their cart with a specified quantity. Duplicate entries are restricted by unique constraints.

5	View / Modify Cart	Displays all items in the user's cart with quantities, prices, and totals. Allows removal of items.
6	Place Order	Executes stored procedure PlaceOrderFromCart to create an order, move items from the cart, and compute total amount.
7	Payment Processing	Updates payment details (method and amount) for each order. Supports Credit Card, Debit Card, UPI, Wallet, and Cash.
8	Automatic Stock Update (Trigger)	Triggers automatically adjust Menu.stock when items are ordered or deleted. Prevents negative stock levels.
9	Order Status Tracking	Order statuses are updated by users/admins. A trigger logs every change in Order_Status_History.
10	Review Submission	Users can submit ratings and comments through the AddReview procedure. Validation ensures ratings between 1 and 5.
11	Admin Dashboard	Admins can add/delete restaurants, manage menu items, and update order statuses from a single interface.
12	Coupon Management	Coupon codes provide percentage-based discounts with validation of expiry date and max discount amount.
13	Data Analytics & Insights	Functions and queries provide insights such as average restaurant ratings.
14	Security & Integrity	The system ensures data consistency through foreign keys, constraints, and controlled SQL operations in the application layer.

2.5 ER Diagram and Representation Schema





Repres	sentation Schema For web based food delivery
Uses	: Tool
	User ID Name Email Phone Pauword Address Roll
Restau	mote:
Re	Stavant 10 Name Location Contact into Email Pauword
Menu	
I+e	m 1D Hem Name Description Price Availability Restaurant 1D
Orden	
0×d0	NID USERID Restaurant 10 Order Date Status Total Amt
Order De	tails:
Orde	Detail 10 Ordin 10 Hem 10 Quantity Sub total
Paymen	
Payr	nent ID Order ID Amount Payment Method Payment status Regner
Dehudy	
Deli	vay ID Order ID Delivery Puron Name Contact No Status



3. List of Softwares/Tools/Programming languages used

SI.	Software / Tool /	Purpose / Description
No.	Language	
1	MySQL 8.0	Backend relational database used to create tables, relationships, triggers, procedures, and functions.
2	MySQL Workbench	Tool for database design, ER diagram creation, query execution, and schema visualization.
3	Python 3.x	Primary programming language used for backend logic and database integration.
4	Streamlit	Web-based frontend framework used to develop the user interface for both users and admins.
5	mysql-connector- python	Python library used to connect the Streamlit application with the MySQL database.
6	pandas	Python library used for handling and displaying database query results in tabular form.
7	Pillow (PIL)	Library used for image handling and display in the Streamlit UI.
8	Git & GitHub	Version control and repository hosting platform for maintaining project code and documentation.
9	VS Code	Integrated development environments (IDEs) used for writing and debugging Python and SQL code.
10	Windows 10	Operating system used for project development and testing environment.

4. DDL Commands

```
-- DATABASE
DROP DATABASE IF EXISTS FoodOrdering;
CREATE DATABASE FoodOrdering;
USE FoodOrdering;
-- USERS
CREATE TABLE Users (
  user_id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  email VARCHAR(100) UNIQUE NOT NULL,
  phone VARCHAR(20),
  address VARCHAR(255),
  password VARCHAR(255),
  created at DATETIME DEFAULT CURRENT TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP
);
-- RESTAURANTS
CREATE TABLE Restaurants (
  restaurant id INT AUTO INCREMENT PRIMARY KEY,
  name VARCHAR(100) NOT NULL,
  address VARCHAR(255),
  phone VARCHAR(20),
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP
);
-- DELIVERY PARTNERS
CREATE TABLE Delivery_Partners (
  delivery_partner_id INT AUTO_INCREMENT PRIMARY KEY,
  name VARCHAR(100),
  phone VARCHAR(20),
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP
);
-- MENU
CREATE TABLE Menu (
  menu id INT AUTO INCREMENT PRIMARY KEY,
  restaurant_id INT NOT NULL,
  name VARCHAR(100) NOT NULL,
  price DECIMAL(8,2) NOT NULL,
  category VARCHAR(50),
  stock INT DEFAULT 100,
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id)
);
-- ORDERS
CREATE TABLE Orders (
  order_id INT AUTO_INCREMENT PRIMARY KEY,
  user_id INT NOT NULL,
  order_date DATETIME DEFAULT CURRENT_TIMESTAMP,
  total amount DECIMAL(10,2) DEFAULT 0.00,
  status ENUM('Pending', 'Confirmed', 'Out for Delivery', 'Delivered', 'Cancelled') DEFAULT 'Pending',
  delivery_partner_id INT DEFAULT NULL,
  coupon_code VARCHAR(50),
  created at DATETIME DEFAULT CURRENT TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  FOREIGN KEY (user_id) REFERENCES Users(user_id),
  FOREIGN KEY (delivery_partner_id) REFERENCES Delivery_Partners(delivery_partner_id)
);
```

```
-- ORDER ITEMS
CREATE TABLE Order_Items (
  order_item_id INT AUTO_INCREMENT PRIMARY KEY,
  order_id INT NOT NULL,
  menu id INT NOT NULL,
  quantity INT DEFAULT 1,
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  FOREIGN KEY (order id) REFERENCES Orders(order id),
  FOREIGN KEY (menu id) REFERENCES Menu(menu id),
  CHECK (quantity > 0)
);
-- CART
CREATE TABLE Cart (
  cart_id INT AUTO_INCREMENT PRIMARY KEY,
  user_id INT NOT NULL,
  menu_id INT NOT NULL,
  quantity INT DEFAULT 1,
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  FOREIGN KEY (user_id) REFERENCES Users(user_id),
  FOREIGN KEY (menu_id) REFERENCES Menu(menu_id),
  UNIQUE KEY uniq_user_menu (user_id, menu_id),
  CHECK (quantity > 0)
);
-- REVIEWS
CREATE TABLE Reviews (
  review id INT AUTO INCREMENT PRIMARY KEY,
  user id INT NOT NULL,
  restaurant_id INT NOT NULL,
  rating INT NOT NULL CHECK (rating BETWEEN 1 AND 5),
  comment VARCHAR(500),
  review_date DATETIME DEFAULT CURRENT_TIMESTAMP,
  created_at DATETIME DEFAULT CURRENT_TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  FOREIGN KEY (user_id) REFERENCES Users(user_id),
  FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id)
);
-- PAYMENTS
CREATE TABLE Payments (
  payment_id INT AUTO_INCREMENT PRIMARY KEY,
  order_id INT NOT NULL,
  payment_date DATETIME DEFAULT CURRENT_TIMESTAMP,
  amount DECIMAL(10,2),
  method VARCHAR(50),
  status ENUM('Pending', 'Completed', 'Failed') DEFAULT 'Pending',
  created at DATETIME DEFAULT CURRENT TIMESTAMP,
  updated_at DATETIME DEFAULT CURRENT_TIMESTAMP ON UPDATE CURRENT_TIMESTAMP,
  FOREIGN KEY (order_id) REFERENCES Orders(order_id)
);
-- ORDER STATUS HISTORY
CREATE TABLE Order_Status_History (
  history_id INT AUTO_INCREMENT PRIMARY KEY,
  order id INT NOT NULL,
  old status VARCHAR(50),
  new_status VARCHAR(50),
  changed_at DATETIME DEFAULT CURRENT_TIMESTAMP,
  changed by VARCHAR(100) DEFAULT 'system',
  FOREIGN KEY (order id) REFERENCES Orders(order id)
```

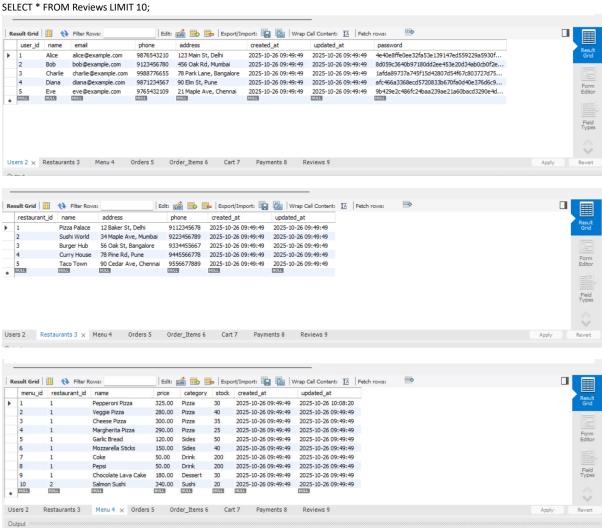
```
-- COUPONS

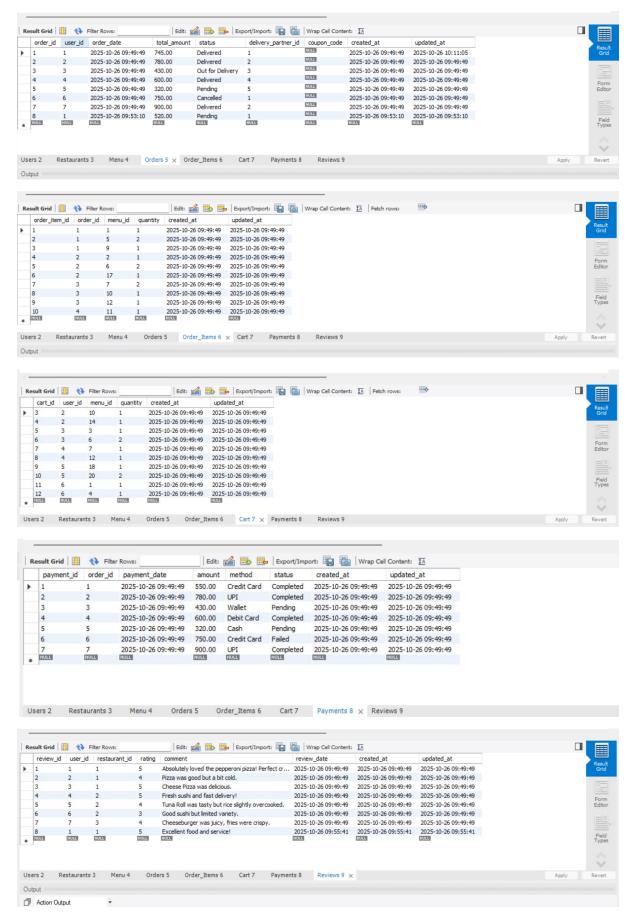
CREATE TABLE Coupons (
    coupon_id INT AUTO_INCREMENT PRIMARY KEY,
    code VARCHAR(50) UNIQUE,
    discount_percent INT CHECK (discount_percent BETWEEN 0 AND 100),
    max_discount_amount DECIMAL(10,2),
    expiry_date DATE,
    active BOOLEAN DEFAULT TRUE,
    created_at DATETIME DEFAULT CURRENT_TIMESTAMP
);
```

5. CRUD Operations

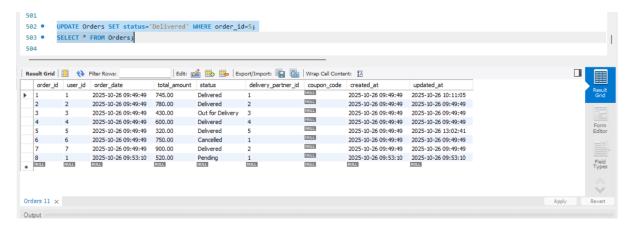
INSERT:

SHOW TABLES;
SELECT * FROM Users LIMIT 5;
SELECT * FROM Restaurants LIMIT 5;
SELECT * FROM Menu LIMIT 10;
SELECT * FROM Orders LIMIT 10;
SELECT * FROM Order_Items LIMIT 10;
SELECT * FROM Cart LIMIT 10;
SELECT * FROM Payments LIMIT 10;
SELECT * FROM Reviews LIMIT 10;





UPDATE:



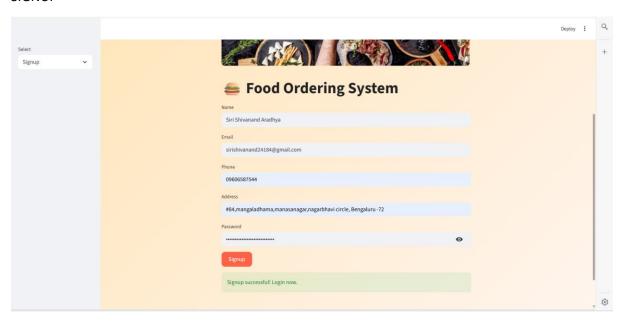
DELETE:

DELETE FROM Cart WHERE user_id=1 AND menu_id=2;

6. List of functionalities/features of the application and its associated screenshots using front end

USER PORTAL

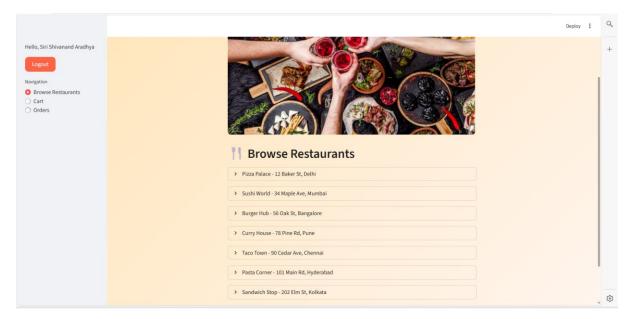
SIGNUP



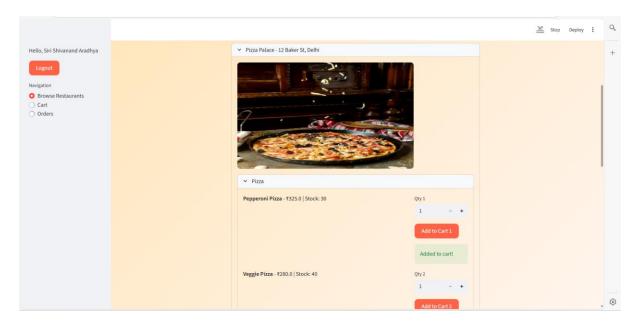
LOGIN



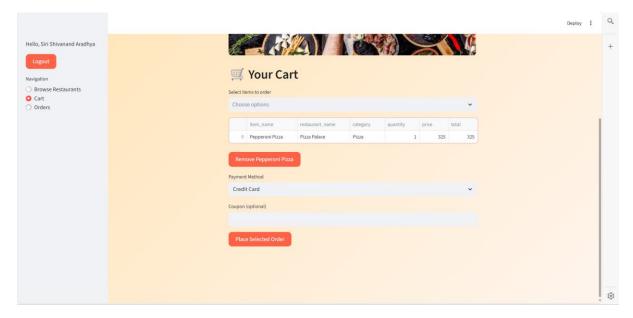
BROWSE RESTAURANT



ADD TO CART

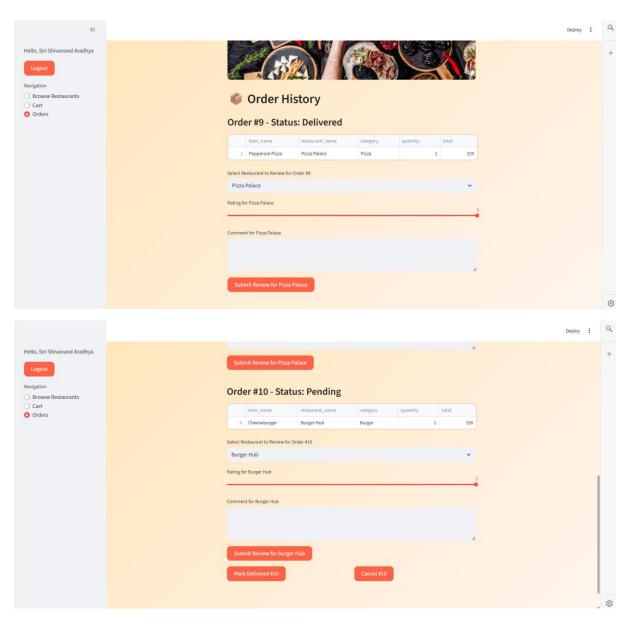


REMOVE FROM CART OR PLACE ORDER



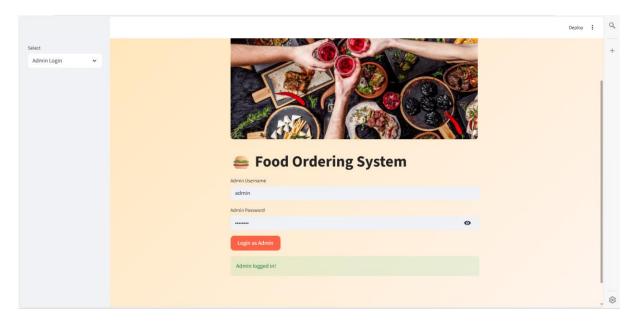
VIEW ORDER HISTORY AND VIEW ORDER STATUS:

RATE AND REVIEW RESTAURANTS AND CANCEL ORDER:

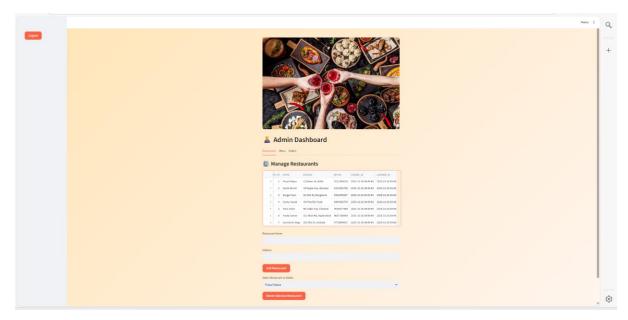


ADMIN PORTAL

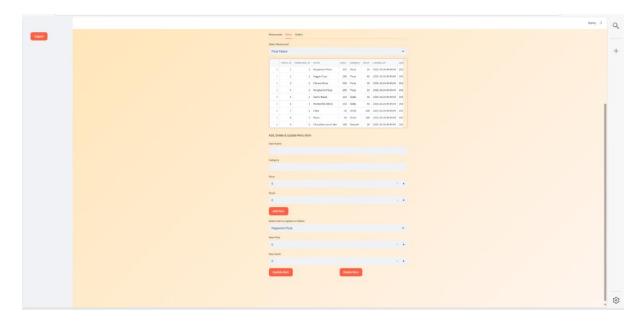
LOGIN:



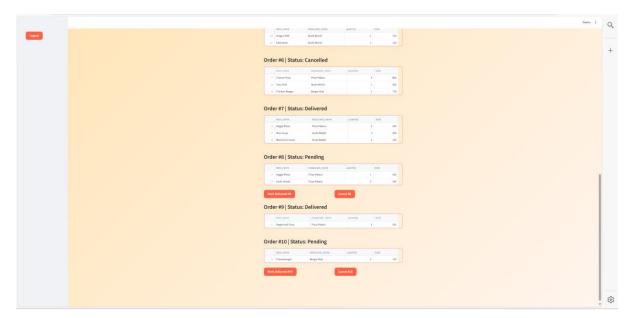
MANAGE RESTAURANTS – ADD/DELETE



ADD, DELETE, UPDATE MENU ITEMS:



ORDER MANAGEMENT



7. Triggers, Procedures/Functions, Nested query, Join, Aggregate queries

FUNCTIONS

```
DELIMITER //
CREATE FUNCTION GetOrderTotal(p_order_id INT)
RETURNS DECIMAL(10,2)
DETERMINISTIC
BEGIN
DECLARE total DECIMAL(10,2) DEFAULT 0.00;
SELECT IFNULL(SUM(m.price * oi.quantity), 0.00) INTO total
FROM Order_Items oi
JOIN Menu m ON oi.menu_id = m.menu_id
WHERE oi.order_id = p_order_id;
RETURN total;
END;
//
```

```
CREATE FUNCTION GetRestaurantAvgRating(p_restaurant_id INT)
RETURNS DECIMAL(3,2)
DETERMINISTIC
BEGIN
 DECLARE avg_rating DECIMAL(3,2);
 SELECT IFNULL(AVG(rating), 0.00) INTO avg_rating
 FROM Reviews
 WHERE restaurant_id = p_restaurant_id;
 RETURN avg rating;
END;
//
DELIMITER;
-- Invoking Functions
SELECT GetOrderTotal(1) AS OrderTotal;
SELECT GetRestaurantAvgRating(1) AS AverageRating;
PROCEDURE
DELIMITER //
CREATE PROCEDURE PlaceOrderFromCart(IN p_user_id INT, IN p_delivery_partner_id INT)
BEGIN
 DECLARE v_order_id INT;
 INSERT INTO Orders (user_id, total_amount, status, delivery_partner_id)
 VALUES (p_user_id, 0.00, 'Pending', p_delivery_partner_id);
 SET v_order_id = LAST_INSERT_ID();
 INSERT INTO Order Items (order id, menu id, quantity)
 SELECT v_order_id, menu_id, quantity FROM Cart WHERE user_id = p_user_id;
  UPDATE Orders
 SET total amount = GetOrderTotal(v order id)
 WHERE order_id = v_order_id;
 DELETE FROM Cart WHERE user_id = p_user_id;
END;
//
CREATE PROCEDURE AddReview(IN p_user_id INT, IN p_restaurant_id INT, IN p_rating INT, IN p_comment VARCHAR(500))
  IF p_rating < 1 OR p_rating > 5 THEN
    SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Rating must be between 1 and 5';
  END IF;
 INSERT INTO Reviews (user_id, restaurant_id, rating, comment)
 VALUES (p_user_id, p_restaurant_id, p_rating, p_comment);
END;
//
DELIMITER;
-- Invoking Procedures
CALL PlaceOrderFromCart(1,1);
CALL AddReview(1,1,5,'Excellent food and service!');
TRIGGERS:
DELIMITER //
{\tt CREATE\ TRIGGER\ trg\_after\_insert\_order\_item}
AFTER INSERT ON Order_Items
FOR EACH ROW
BEGIN
  UPDATE Menu SET stock = stock - NEW.quantity WHERE menu_id = NEW.menu_id;
 IF (SELECT stock FROM Menu WHERE menu id = NEW.menu id) < 0 THEN
    SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Insufficient stock for the menu item';
 END IF;
```

```
UPDATE Orders SET total_amount = GetOrderTotal(NEW.order_id) WHERE order_id = NEW.order_id;
END;
//
CREATE TRIGGER trg_after_delete_order_item
AFTER DELETE ON Order_Items
FOR EACH ROW
BEGIN
  UPDATE Menu SET stock = stock + OLD.quantity WHERE menu_id = OLD.menu_id;
 UPDATE Orders SET total amount = GetOrderTotal(OLD.order id) WHERE order id = OLD.order id;
END;
//
CREATE TRIGGER trg_orders_update_status_after
AFTER UPDATE ON Orders
FOR EACH ROW
BEGIN
  IF NEW.status <> OLD.status THEN
    INSERT INTO Order_Status_History (order_id, old_status, new_status, changed_by)
    VALUES (NEW.order_id, OLD.status, NEW.status, 'system');
  END IF;
END;
//
DELIMITER;
-- Trigger demonstration
INSERT INTO Order Items (order id, menu id, quantity) VALUES (1,1,2); -- trg after insert order item fires
DELETE FROM Order_Items WHERE order_item_id=(SELECT MAX(order_item_id) FROM Order_Items WHERE menu_id=1); --
trg_after_delete_order_item fires
UPDATE Orders SET status='Delivered' WHERE order_id=1; -- trg_orders_update_status_after fires
NESTED QUERIES:
DELETE FROM Order Items
WHERE order_item_id = (
  SELECT t.order_item_id
  FROM (
    SELECT MAX(order_item_id) AS order_item_id
    FROM Order_Items
    WHERE menu_id = 1
 ) AS t
);
JOIN QUERIES:
-- Example Join (Participants & Events)
SELECT p.participant_name
FROM participant p
JOIN registration r ON p.participant_id = r.participant_id
JOIN event e ON r.event_id = e.event_id
WHERE e.price > (SELECT AVG(price) FROM event);
-- Orders with Users
SELECT o.order_id, u.name, o.total_amount
FROM Orders o
JOIN Users u ON o.user_id = u.user_id;
Aggregate Queries:
-- Average rating per restaurant
SELECT restaurant_id, AVG(rating) AS manual_avg
```

FROM Reviews
GROUP BY restaurant_id;

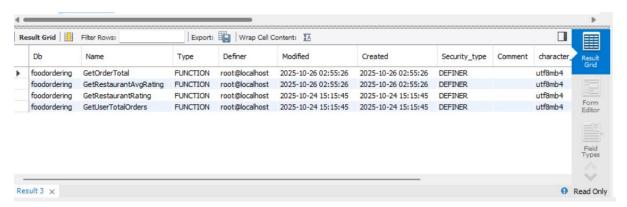
8. Ss for triggers, procedure, functions output

FUNTIONS:

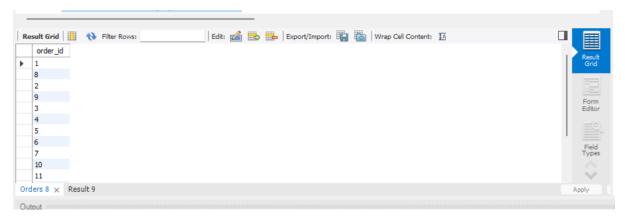
```
385
            USE FoodOrdering;
306
            -- Function: GetOrderTotal
387
            DELIMITER //
388
            CREATE FUNCTION GetOrderTotal(p_order_id INT)
            RETURNS DECIMAL(10,2)
310
            DETERMINISTIC
311
        BEGIN
312
                DECLARE total DECIMAL(18,2) DEFAULT 8.88;
313
                SELECT IFNULL(SUM(m.price * oi.quantity), 0.00) INTO total
314
               FROM Order_Items ai
315
316
                30IN Menu m ON oi.menu_id = m.menu_id
                WHERE oi.order_id = p_order_id;
                RETURN total;
318
319
          - END;
            DELIMITER ;
323
            -- Function: GetRestaurantAvgRating
            CREATE FUNCTION GetRestaurantAvgRating(p_restaurant_id INT)
            RETURNS DECIMAL(3,2)
            DETERMINISTIC
        BEGIN
329
                DECLARE avg_rating DECIMAL(3,2);
330
                SELECT IFMULL(AVG(rating), 0.00) INTO avg_rating
                FROM Reviews
331
                WHERE restaurant_id = p_restaurant_id;
332
                RETURN avg_rating;
333
           END;
334
335
            DELIMITER ;
336
```

```
337
338 • -- Functions Created
339
         SHOW FUNCTION STATUS WHERE Db = 'FoodOrdering';
340
         SELECT order_id FROM Orders;
341 •
342 •
         SELECT GetOrderTotal(10) AS OrderTotal;
343
344 •
        SELECT restaurant_id, name FROM Restaurants;
345
         SELECT GetRestaurantAvgRating(1) AS AverageRating;
346
         SELECT restaurant_id, AVG(rating) AS manual_avg
347 ●
348
         FROM Reviews
         GROUP BY restaurant_id;
349
350
```

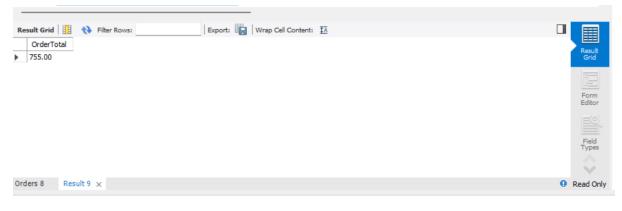
BEFORE:



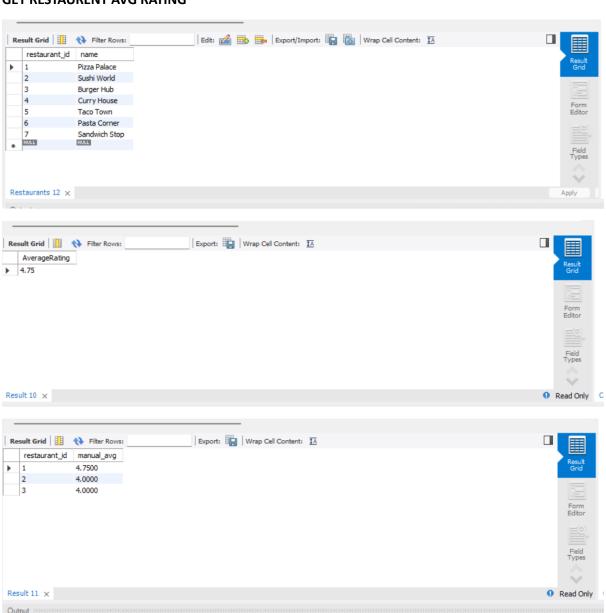
AFTER:



GET ORDER TOTAL



GET RESTAURENT AVG RATING

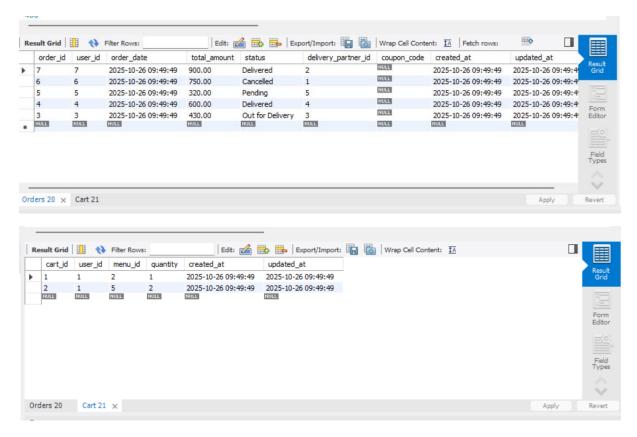


PROCEDURE

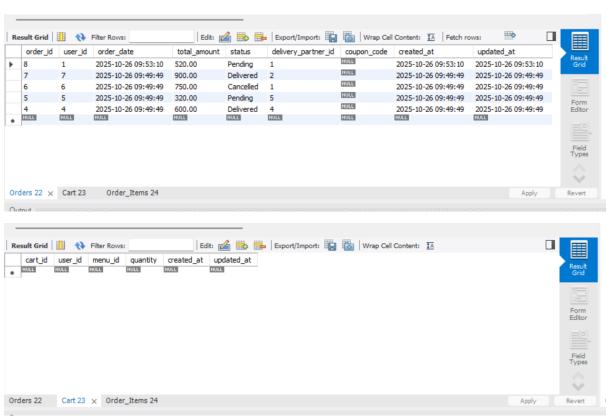
```
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 350
 351
                             -- procedure
352
                          DELIMITER //
                        CREATE PROCEDURE PlaceOrderFromCart(IN p_user_id INT, IN p_delivery_partner_id INT)
 353 ●
354 ⊝ BEGIN
                                      DECLARE v_order_id INT;
355
 356
 357
                                       -- 1. Create an order entry
 358
                                      INSERT INTO Orders (user_id, total_amount, status, delivery_partner_id)
 359
                                        VALUES (p_user_id, 0.00, 'Pending', p_delivery_partner_id);
 360
                                      SET v_order_id = LAST_INSERT_ID();
 361
 362
                                      -- 2. Copy all cart items into Order_Items
363
                                      INSERT INTO Order_Items (order_id, menu_id, quantity)
 364
                                        SELECT v_order_id, menu_id, quantity FROM Cart WHERE user_id = p_user_id;
 365
 366
 367
                                       -- 3. Calculate total and update Orders table
 368
                                    UPDATE Orders
 369
                                      SET total_amount = GetOrderTotal(v_order_id)
                                       WHERE order_id = v_order_id;
 370
 371
 372
                                        -- 4. Clear the user's cart
                                        DELETE FROM Cart WHERE user_id = p_user_id;
 373
                       END;
 374
```

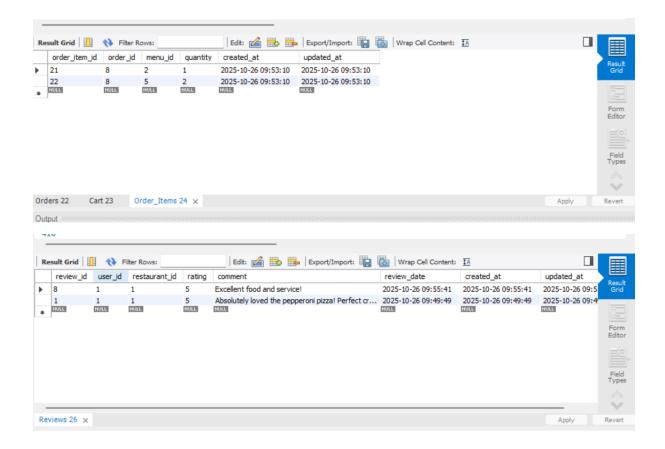
```
377
  378
            DELIMITER //
  379 • 

CREATE PROCEDURE AddReview(
                IN p_user_id INT,
  388
                IN p_restaurant_id INT,
  381
                IN p_rating INT,
  382
                IN p_comment VARCHAR(500)
  383
          - )
  384
        ⊖ BEGIN
  385
  386
                IF p_rating < 1 OR p_rating > 5 THEN
                    SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Rating must be between 1 and 5';
  387
  388
                END IF;
  389
  390
                INSERT INTO Reviews (user_id, restaurant_id, rating, comment)
  391
                VALUES (p_user_id, p_restaurant_id, p_rating, p_comment);
          END;
  392
  393
            11
            DELIMITER ;
  394
  395
  396 •
            SHOW PROCEDURE STATUS WHERE Db='FoodOrdering';
  397
            SELECT * FROM Orders ORDER BY order_id DESC LIMIT 5;
  398
            SELECT * FROM Cart WHERE user_id = 1;
  399 •
  400
  401 •
          CALL PlaceOrderFromCart(1, 1);
403 •
       SELECT * FROM Orders ORDER BY order_id DESC LIMIT 5;
       SELECT * FROM Cart WHERE user_id = 1;
404 •
       SELECT * FROM Order_Items WHERE order_id = (SELECT MAX(order_id) FROM Orders WHERE user_id=1);
405 •
496
407 • CALL AddReview(1, 1, 5, 'Excellent food and service!');
408
409 • SELECT * FROM Reviews WHERE user_id=1 ORDER BY review_date DESC LIMIT 3;
410
Result Grid Filter Rows:
                             Export: Wrap Cell Content: IA
  Db
                                  Definer
                                            Modified
                                                          Created
                                                                        Security_type Comment character
 foodordering
           AddReview
                         PROCEDURE
                                 root@localhost
                                            2025-10-26 09:49:49
                                                          2025-10-26 09:49:49
 foodordering PlaceOrderFromCart PROCEDURE root@localhost 2025-10-26 09:49:49 2025-10-26 09:49:49 DEFINER
                                                                                         utf8mb4
Result 19 ×
                                                                                        Read Only
                                                                                                         Con
```



AFTER





TRIGGERS:

```
□ □ □ | F F Q □ | B | □ □ □ | Limit to 1000 rows
410
411
        -- triggers
412
        DELIMITER //
413
414 •
        CREATE TRIGGER trg_after_insert_order_item
415
        AFTER INSERT ON Order_Items
        FOR EACH ROW
416
417

→ BEGIN

418
           -- Decrease stock for ordered item
          UPDATE Menu
419
          SET stock = stock - NEW.quantity
420
421
            WHERE menu_id = NEW.menu_id;
422
423
            -- If stock goes negative, signal error
424
            IF (SELECT stock FROM Menu WHERE menu_id = NEW.menu_id) < 0 THEN
425
               SIGNAL SQLSTATE '45000'
426
               SET MESSAGE_TEXT = 'Insufficient stock for the menu item';
            END IF;
427
428
            -- Recalculate order total
429
430
            UPDATE Orders
431
            SET total_amount = GetOrderTotal(NEW.order_id)
            WHERE order_id = NEW.order_id;
432
433
        END:
        //
434
```

```
437 •
       CREATE TRIGGER trg_after_delete_order_item
       AFTER DELETE ON Order_Items
438
       FOR EACH ROW
439
440

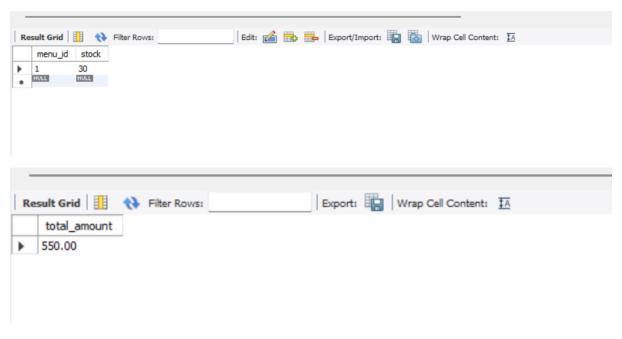
→ BEGIN

441
          UPDATE Menu
442
          SET stock = stock + OLD.quantity
443
          WHERE menu_id = OLD.menu_id;
444
445
          UPDATE Orders
446
          SET total_amount = GetOrderTotal(OLD.order_id)
          WHERE order_id = OLD.order_id;
447
448
449
       DELIMITER :
450
451
       DELIMITER //
452 • CREATE TRIGGER trg_orders_update_status_after
       AFTER UPDATE ON Orders
453
       FOR EACH ROW
455
     ⊖ BEGIN
456
          IF NEW.status <> OLD.status THEN
             INSERT INTO Order_Status_History (order_id, old_status, new_status, changed_by)
457
458
             VALUES (NEW.order_id, OLD.status, NEW.status, 'system');
          END IF:
459
      - END;
460
461
       11
       | 🐓 🙀 🔘 | 🔞 | 🔘 🔘 | Limit to 1000 rows
                                                                   - | 🛵 | 🥩 🔍 🗻 🖃
SHOW TRIGGERS;
464 •
465
466
         SELECT menu_id, stock FROM Menu WHERE menu_id = 1;
         SELECT total_amount FROM Orders WHERE order_id = 1;
467 •
468
469
         INSERT INTO Order_Items (order_id, menu_id, quantity) VALUES (1, 1, 2);
470
         SELECT menu_id, stock FROM Menu WHERE menu_id = 1;
471 •
472 •
         SELECT total_amount FROM Orders WHERE order_id = 1;
473
474
         SELECT stock FROM Menu WHERE menu_id = 1;
475
         DELETE FROM Order_Items
476
477
      O WHERE order_item_id = (
478
             SELECT t.order_item_id
             FROM (
479
480
                  SELECT MAX(order_item_id) AS order_item_id
                  FROM Order_Items
481
                  WHERE menu_id = 1
482
             ) AS t
483
484
         );
485 •
         SELECT stock FROM Menu WHERE menu_id = 1;
486
487 •
         SELECT * FROM Order_Status_History WHERE order_id = 1;
488
```

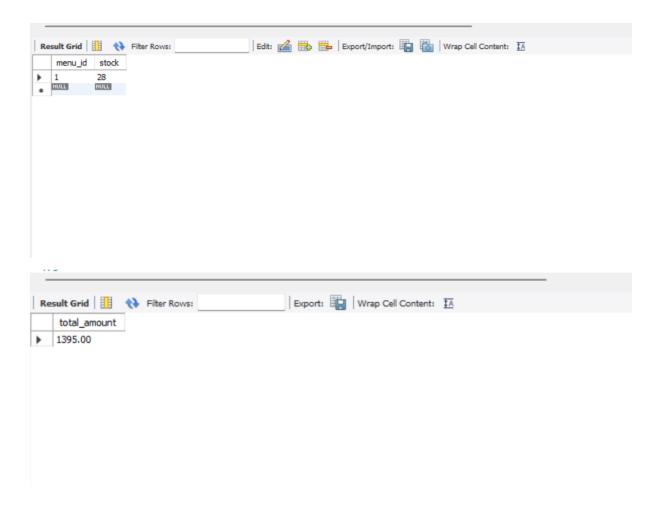
```
485 •
         SELECT stock FROM Menu WHERE menu_id = 1;
486
         SELECT * FROM Order_Status_History WHERE order_id = 1;
487
488
489
490
         UPDATE Orders SET status='Delivered' WHERE order_id=1;
491
492
         SELECT * FROM Order_Status_History WHERE order_id = 1;
493
494
         SELECT * FROM Cart WHERE user_id=1 AND menu_id=1;
495
         INSERT INTO Cart (user_id, menu_id, quantity) VALUES (1,1,2);
         SELECT * FROM Cart WHERE user_id=1 AND menu_id=1;
497
Result Grid | Filter Rows:
                Export: Wrap Cell Content: IA
```

BEFORE

Stock & Total Update Trigger:

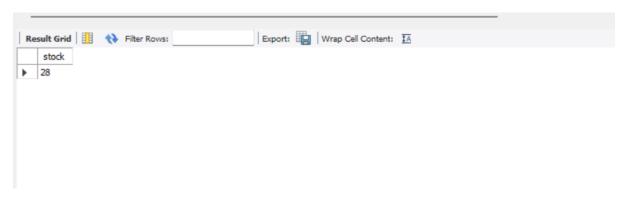


AFTER



Delete Trigger

BEFORE

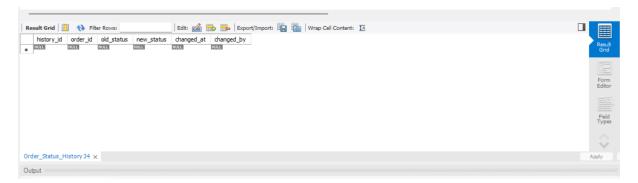


AFTER

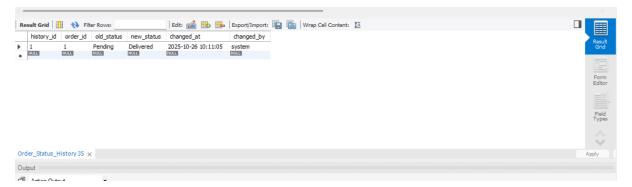


Order Status History Trigger

BEFORE:

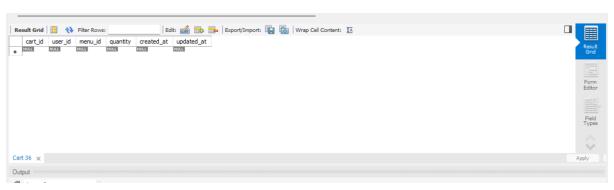


AFTER:

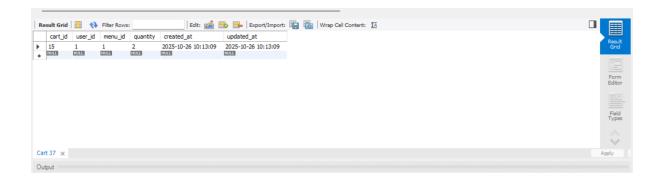


Cart Quantity Increment Trigger

BEFORE:



AFTER:



9. GitHub repo link:

https://github.com/sirishivanand24184-png/FOOD-ORDERING-SYSTEM-.git