

DBMS PROJECT REPORT

TREATS ON TRACKS

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Abstract:

The "Treats on Tracks" project is designed to create a comprehensive database management system (DBMS) that facilitates food ordering for passengers traveling by train. The system provides an intuitive platform for users to register, log in, and browse through a variety of restaurants and their menus. Passengers can place orders directly from their seats and make payments seamlessly.

Introduction

The application is built with a dual-user perspective, catering to both regular passengers and administrative users. Passengers can manage their profiles, view their order history, and receive updates on their order status. Administrators have the capability to manage restaurant listings, update menu items, and oversee order transactions. This project not only enhances the travel experience by providing easy access to food options but also streamlines the ordering process, ensuring that passengers can enjoy their meals without the hassle of leaving their seats.

- **User Requirements:**

1. Passenger Requirements:

- Registration and Login: Users should be able to create an account by providing personal details and secure login credentials. Password recovery options should also be available.
- Profile Management: Users should be able to view and update their personal information such as name, phone number, and email address.
- Menu Browsing: Users should be able to view a list of available restaurants and their respective menu items, including prices and descriptions.
- Order Placement: Users should be able to select items from the menu, specify quantities, and place an order. A confirmation of the order should be provided.
- Payment Processing: Users should have multiple payment options (e.g., credit/debit card, e-wallet) and receive a receipt upon successful payment.

- Order Tracking: Users should receive notifications regarding the status of their orders, including confirmation and estimated delivery time.
2. Admin Requirements:
- User Management: Admins should be able to view, edit, and delete passenger accounts as necessary.
 - Restaurant Management: Admins should have the ability to add new restaurants, update existing restaurant information, and delete restaurants that are no longer in operation.
 - Menu Management: Admins should be able to add new menu items, update item details (name, price, availability), and remove items from the menu.
 - Order Management: Admins should be able to view all orders placed, track their statuses, and manage any issues related to order fulfillment.
 - Reporting: Admins should have access to reports on sales, user activity, and inventory levels to make informed decisions.

Functional Requirements

1. User Registration and Login: Allow users to create accounts and log in.
2. Profile Management: Enable users to view and update personal information.
3. Menu Browsing: Provide a list of restaurants and their menu items.
4. Order Placement: Allow users to select items and place orders.
5. Payment Processing: Support multiple payment options with receipts.
6. Order Tracking: Notify users about order status and updates.
7. Admin Management: Enable admins to manage users, restaurants, and menu items.

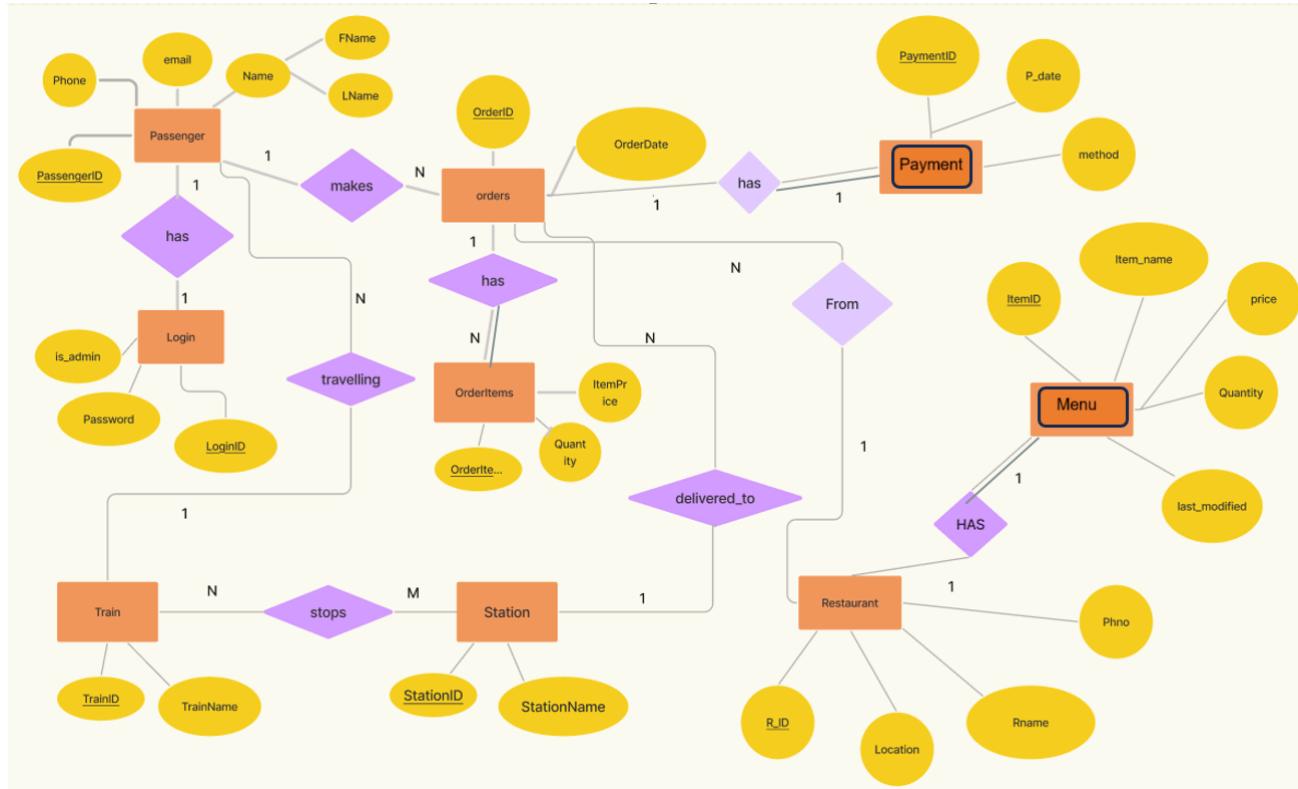
Non-Functional Requirements

1. Performance: The application should load quickly and handle multiple users simultaneously.
2. Security: User data and transactions must be securely handled and protected.
3. Usability: The interface should be user-friendly and easy to navigate.
4. Scalability: The system should accommodate future growth in user base and data.
5. Reliability: The application should be available and functional with minimal downtime.
6. Maintainability: The codebase should be organized for easy updates and modifications.

List of Programming Languages Used

- HTML:
Used for structuring the web application and creating user interfaces, including forms for registration and order placement.
- CSS:
Employed for styling the web application to enhance visual appeal and user experience through layout design and formatting.
- JavaScript:
Utilized for adding interactivity to the application, including form validation and dynamic content updates to improve responsiveness.
- MySQL:
A relational database management system used to store and manage data, including user accounts, restaurant details, and orders efficiently.
- Flask:
A lightweight Python web framework that handles backend logic, processes user requests, and connects the frontend to the MySQL database for data operations.

E-R DIAGRAM



Entities:

- **Passenger:** Represents a person traveling on the train.
 - Attributes: PassengerID, Name, Email, Phone
- **Payment:** Represents a payment made by a passenger.
 - Attributes: PaymentID, Amount, Date, Method
- **Menu:** Represents the food and beverage menu available on the train.
 - Attributes: MenuID, ItemName, Price, Quantity
- **Station:** Represents a train station.
 - Attributes: StationID, StationName, Location
- **Train:** Represents a train.
 - Attributes: TrainID, TrainName, DepartureTime, ArrivalTime

Relationships:

- **Passenger - Payment:** One-to-many. A passenger can make multiple payments.
- **Payment - Menu:** One-to-one. A payment is for one menu item.
- **Menu - Train:** One-to-one. A menu is associated with one train.
- **Station - Train:** Many-to-many. A train can stop at multiple stations, and a station can be used by multiple trains.

RELATIONAL SCHEMA

Passenger

PassengerID	Fname	Lname	Phone	email
-------------	-------	-------	-------	-------

Station

StationID	Sname
-----------	-------

Restaurant

RID	Rname	Location	Phno	Station_id
-----	-------	----------	------	------------

menu

Res_ID	ItemID	Item_name	Price	Image	Quantity
--------	--------	-----------	-------	-------	----------

Orders

OrderID	Order_date	Passenger_id	R_ID	S_ID
---------	------------	--------------	------	------

orderitems

OrdItemID	ItemPrice	quantity	Order_id	R_ID	ItemID
-----------	-----------	----------	----------	------	--------

Login

LoginID	Password	user_id	is_admin
---------	----------	---------	----------

Payment

order_id	paymentID	payment_method	date
----------	-----------	----------------	------

Train

TrainID	TrainName
---------	-----------

Stops

Train_id	Station_id
----------	------------

Create Operations

1. Insert Passenger Details and Login Credentials During Registration

```
INSERT INTO passenger(PassengerID, Fname, Lname, Phone, email)
VALUES (%s, %s, %s, %s, %s)
```

- Adds a new passenger's personal details (first name, last name, phone, and email) to the `passenger` table.

```
INSERT INTO Login (LoginID, Password, user_id, is_admin) VALUES
(%s, %s, %s, %s)
```

- Adds login details for a passenger, including their role (admin or user), in the `Login` table.

Register for TreatsOnTracks

Username: sham

Password:

First Name: sham

Last Name: sham

Phone Number: 9886072324

Email: sham@gmail.com

Role: User

Register

Already have an account? [Login here](#)

Home Menu About Shop

Username: sham

Password:

Login

Don't have an account? [Register here](#)

2. Create MySQL User and Grant Privileges

```
CREATE USER IF NOT EXISTS %s@'localhost' IDENTIFIED BY %s;
```

- Creates a new MySQL user if they don't already exist.

```
GRANT ALL PRIVILEGES ON *.* TO %s@'localhost' WITH GRANT OPTION;
```

- Grants full privileges to admin users.

```
GRANT SELECT, INSERT ON *.* TO %s@'localhost';
```

```
GRANT UPDATE ON passenger TO %s@'localhost';
```

- Grants limited privileges (select, insert) to regular users, with update privileges only on the `passenger` table.

3. Place an Order

```
INSERT INTO orders (OrderID, Order_date, R_ID, S_ID,  
Passenger_id) VALUES (%s, %s, %s, %s, %s)
```

- Inserts a new order into the `orders` table with details like order ID, date, restaurant ID, station ID, and passenger ID.

```
INSERT INTO orderitems (OrdItemID, ItemPrice, quantity, Order_id,  
R_ID, ItemID) VALUES (%s, %s, %s, %s, %s, %s)
```

- Adds each ordered item's price, quantity, order ID, restaurant ID, and item ID into `orderitems`.

```

mysql> select * from orders;
+-----+-----+-----+-----+-----+
| OrderID | Order_date | Passenger_id | R_ID | S_ID |
+-----+-----+-----+-----+-----+
| 6208e637 | 2024-11-12 | M7S8B19Y48 | R001 | S001 |
| a1dbea0c | 2024-11-12 | M7S8B19Y48 | R001 | S001 |
| ae5e6c3a | 2024-11-12 | M7S8B19Y48 | R001 | S001 |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from orderitems;
+-----+-----+-----+-----+-----+-----+
| OrdItemID | ItemPrice | quantity | Order_id | R_ID | ItemID |
+-----+-----+-----+-----+-----+-----+
| cde06704 | 300.00 | 2 | a1dbea0c | R001 | I001 |
| e528edb3 | 260.00 | 10 | 6208e637 | R001 | I012 |
| ec8145e1 | 180.00 | 3 | ae5e6c3a | R001 | I005 |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

(BASED ON USER SELECTION)

4. Record Payment Details

```

INSERT INTO payment (order_id, paymentID, payment_method, date)
VALUES (%s, %s, %s, %s)

```

- Inserts a new payment record with details like order ID, payment ID, method, and date.

```

mysql> select * from payment;
+-----+-----+-----+-----+
| order_id | paymentID | payment_method | date |
+-----+-----+-----+-----+
| 6208e637 | 4757b95f | Cash | 2024-11-12 |
| a1dbea0c | b8709214 | Cash | 2024-11-12 |
| ae5e6c3a | e736f7af | DebitCard | 2024-11-12 |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

5. Add New Menu Item

```

INSERT INTO menu (Res_ID, ItemID, Item_name, Price, Image,
Quantity) VALUES (%s, %s, %s, %s, %s, %s)

```

- Inserts a new menu item with details like restaurant ID, item ID, name, price, image, and quantity.

≡ FoodDesk Admin

- [Dashboard](#)
- [Update Restaurant](#)
- [Update Menu](#)
- [Restaurant Statistics](#)

Menu Management

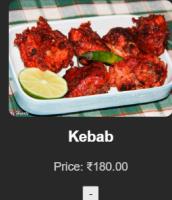
Restaurant ID: R001 Item ID: I012 Item Name: Mutton chops Price: ₹260 Image

Choose file: mutton chops.jpg Quantity: 10 Add/Update Item

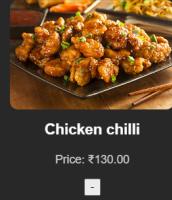
Menu for Donne Biryani (ID: R001)



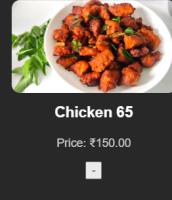
Biryani
Price: ₹300.00



Kebab
Price: ₹180.00



Chicken chilli
Price: ₹130.00



Chicken 65
Price: ₹150.00



Chicken Chops







Read Operations

1. Login Query

```
SELECT user_id, is_admin FROM Login WHERE LoginID = %s AND Password = %s
```

- Verifies login credentials and retrieves `user_id` and role (`is_admin`) for a user.

```
mysql> select * from login;
+-----+-----+-----+-----+
| LoginID | Password | user_id | is_admin |
+-----+-----+-----+-----+
| a       | a       | DNLOIF26ID | 1      |
| s       | s       | M7S8B19Y48  | 0      |
| sravani | ss      | AB8XVZXZ2P  | 1      |
+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```

mysql> SELECT user_id, is_admin
      -> FROM Login
      -> WHERE LoginID = 'sravani' AND Password = 'ss';
+-----+-----+
| user_id | is_admin |
+-----+-----+
| AB8XVZXZ2P |      1 |
+-----+-----+
1 row in set (0.00 sec)

```

2. Fetch Restaurants and Menu Items for Admin Dashboard

`SELECT Rname, Location, Phno, RID FROM restaurant`

- Retrieves all restaurants for display in the admin dashboard.

The screenshot shows the 'FoodDesk Admin' application interface. On the left, there's a sidebar with navigation links: 'Dashboard', 'Update Restaurant', 'Update Menu', and 'Restaurant Statistics'. The main area is titled 'Restaurant Management' and displays a grid of eight cards, each representing a restaurant with its name, location, phone number, and an 'Update' button.

Restaurant Name	Location	Phone Number	Action
Donne Biryani	Bangalore	9876543212	Update
Hyderabad Biryani	Hyderabad	9871203456	Update
Burger King	Bangalore	9123456789	Update
Nandhana Palace	Mysore	7979075750	Update
Meghana Foods	Chennai	9595035350	Update
Paradise Biryani	Mysore	8197181971	Update
Nagarjuna's	Hyderabad	6780998769	Update
Taaza Upahar	Chennai	7864350298	Update

☰ FoodDesk Admin

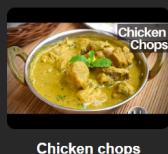
- [Dashboard](#)
- [Update Restaurant](#)
- [Update Menu](#)
- [Restaurant Statistics](#)

Menu Management

Restaurant ID: Item ID: Item Name: Price: Image:

Choose File: No file chosen Quantity: Add/Update Item:

Menu for Donne Biryani (ID: R001)

 Biryani Price: ₹300.00	 Kebab Price: ₹180.00	 Chicken chilli Price: ₹130.00	 Chicken 65 Price: ₹150.00
 Chicken chops Price: ₹180.00	 Fish Tawa fry Price: ₹300.00	 Egg Fry Price: ₹120.00	 Egg Masala

SELECT Item_name, Price, Image FROM menu WHERE Res_ID = %s

- Retrieves all menu items for each restaurant.

```
mysql> SELECT Item_name, Price FROM menu WHERE Res_ID = 'R001'
-> ;
+-----+-----+
| Item_name | Price |
+-----+-----+
| Biryani   | 300.00 |
| Kebab    | 180.00 |
| Chicken chilli | 130.00 |
| Chicken 65 | 150.00 |
| Chicken chops | 180.00 |
| Fish Tawa fry | 300.00 |
| Egg Fry   | 120.00 |
| Egg Masala | 100.00 |
| Mutton chops | 260.00 |
+-----+-----+
9 rows in set (0.00 sec)
```

3. Fetch User Profile Information

SELECT PassengerID, Fname, Lname, Phone, email FROM passenger
WHERE PassengerID = %s

- Retrieves profile details of a passenger based on their ID.

```

mysql> select * from passenger;
+-----+-----+-----+-----+-----+
| PassengerID | Fname | Lname | Phone | email |
+-----+-----+-----+-----+-----+
| AB8XVZXZ2P | sravani | revuri | 9886531909 | rv@gmail.com |
| DNLOIF26ID | a | a | 9886531906 | a@gmail.com |
| M7S8B19Y48 | s | s | 9886531900 | s@gmail.com |
+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

```

4. Fetch Train Stops Based on Train ID

`SELECT s.Station_id, st.Sname FROM stops s JOIN Station st ON s.Station_id = st.StationID WHERE s.Train_id = %s`

- Retrieves all stops of a train with station IDs and names.

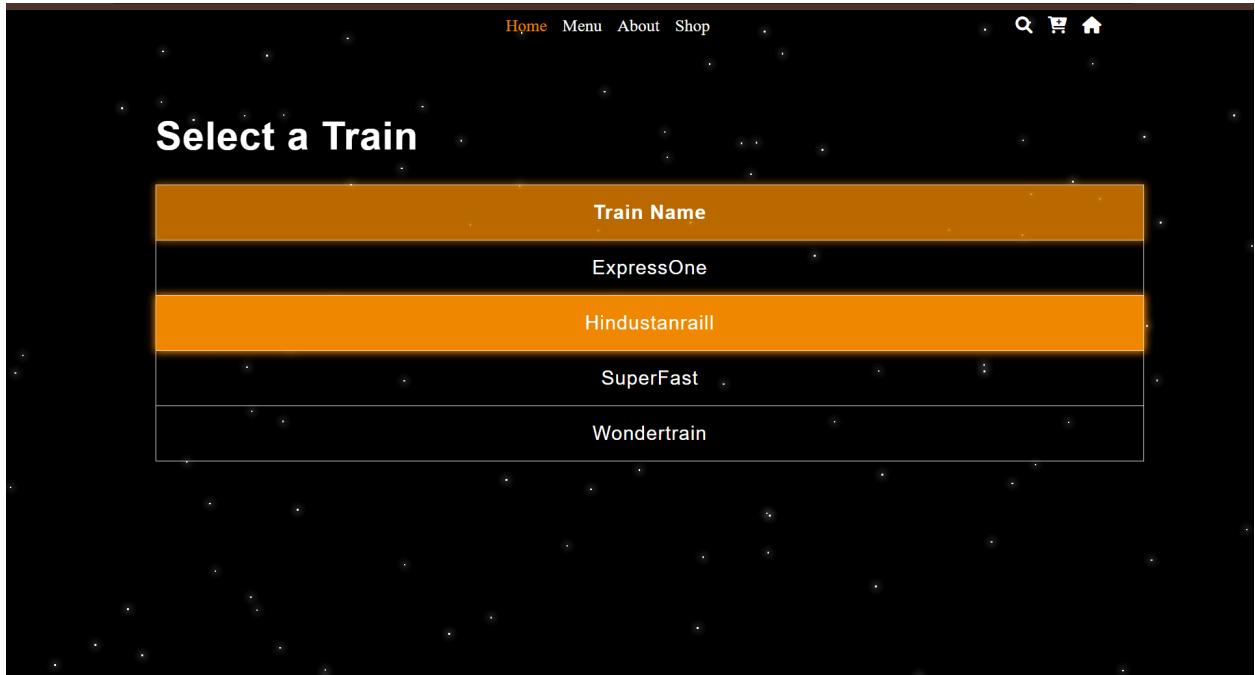
The screenshot shows a web page with a dark background. At the top, there is a navigation bar with links: Home, Menu, About, and Shop. Below the navigation bar, the title "Stops for Train T004" is displayed in bold white text. Underneath the title is a table with a yellow header row containing the text "Station Name". The table has three data rows, each containing a station name: "Bangalore", "Chennai", and "Mysore".

Station Name
Bangalore
Chennai
Mysore

5. Fetch All Trains

`SELECT TrainID, TrainName FROM train`

- Retrieves all train IDs and names.



6. Fetch Restaurants at a Specific Station

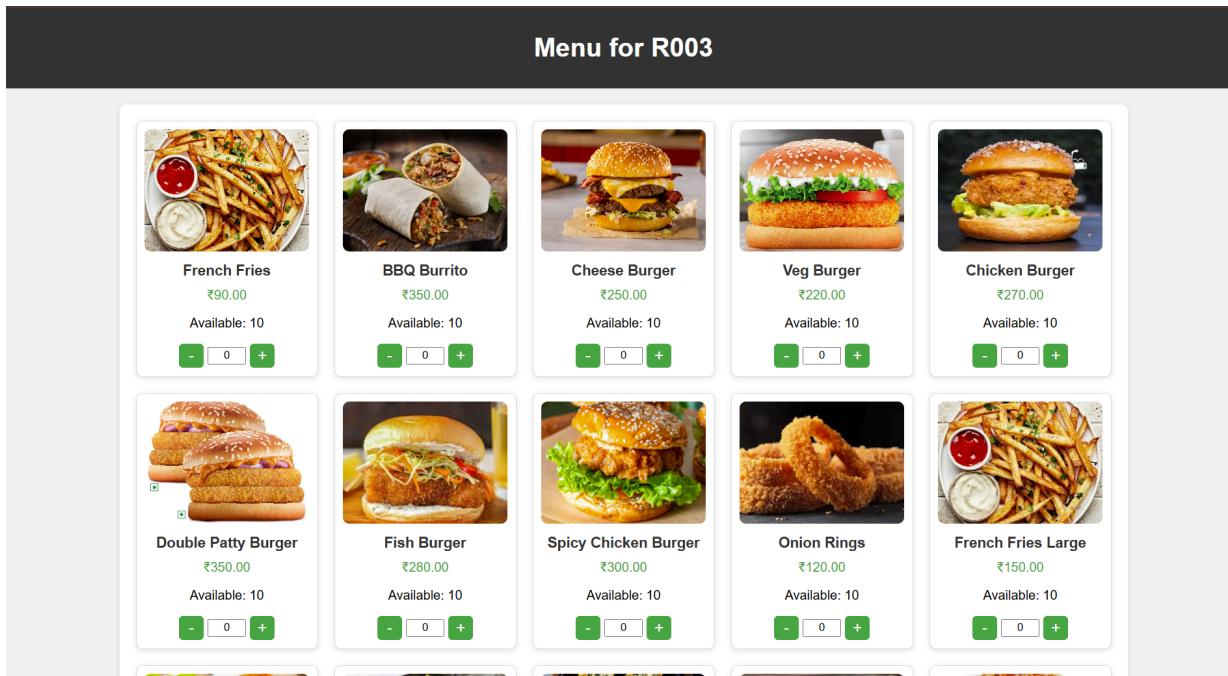
SELECT Rname, RID, Phno FROM restaurant WHERE Station_id = %s

- Fetches all restaurants available at a specified station.

Available Restaurants at S001	
Restaurant Name	Phone Number
Donne Biryani	9876543212
Burger King	9123456789

7. Fetch Menu Items at a Restaurant

SELECT Item_name, Price, Image, quantity FROM menu WHERE Res_ID = %s



- Retrieves menu items available at a selected restaurant.

Update Operations

1. Update Restaurant Details

```
UPDATE restaurant SET Rname = %s, Location = %s, Phno = %s WHERE RID = %s
```

- Updates the details of a restaurant (name, location, phone) based on its ID.

The screenshot shows the 'Restaurant Management' section of the FoodDesk Admin interface. On the left, there is a sidebar with navigation options: Dashboard, Update Restaurant, Update Menu, and Restaurant Statistics. The main area displays four cards for existing restaurants:

- Donne Biryani**: Located in Bangalore, Phone Number: 9876543212. Update button.
- Meghana Foods**: Located in Chennai, Phone Number: 9595035350. Update button.
- King**: Located in Bangalore, Phone Number: 9123456789. Update button.
- Nandhana Palace**: Located in Mysore, Phone Number: 7979075750. Update button.

A central modal window titled "Update Restaurant" is open for the "King" restaurant. It contains fields for "Restaurant Name" (Donne Biryani), "Location" (Bangalore), and "Phone Number" (9876543212). It also has "Submit" and "Cancel" buttons.

2. Update User Profile

UPDATE passenger SET Fname = %s, Lname = %s, Phone = %s, email = %s WHERE PassengerID = %s

- Updates a passenger's profile details (first name, last name, phone, and email).

Welcome, s s

Passenger ID	M7S8B19Y48
Phone	9000875064
Email	s@gmail.com

Edit Profile

First Name:
s

Last Name:
s

Phone Number:
9886531900

Email:
s@gmail.com

Update Profile

Welcome, s s

Passenger ID	M7S8B19Y48
Phone	9886531900
Email	s@gmail.com

Edit Profile Logout

First Name:

Last Name:

Phone Number:

Email:

Update Profile

3. Update Menu Item

```
SELECT ItemID FROM menu WHERE Res_ID = %s AND ItemID = %s
```

- Checks if an item exists in a restaurant's menu by item ID.

```
UPDATE menu SET Item_name = %s, Price = %s, Image = %s, Quantity = %s  
WHERE Res_ID = %s AND ItemID = %s
```

- Updates details of an existing menu item (name, price, image, quantity).

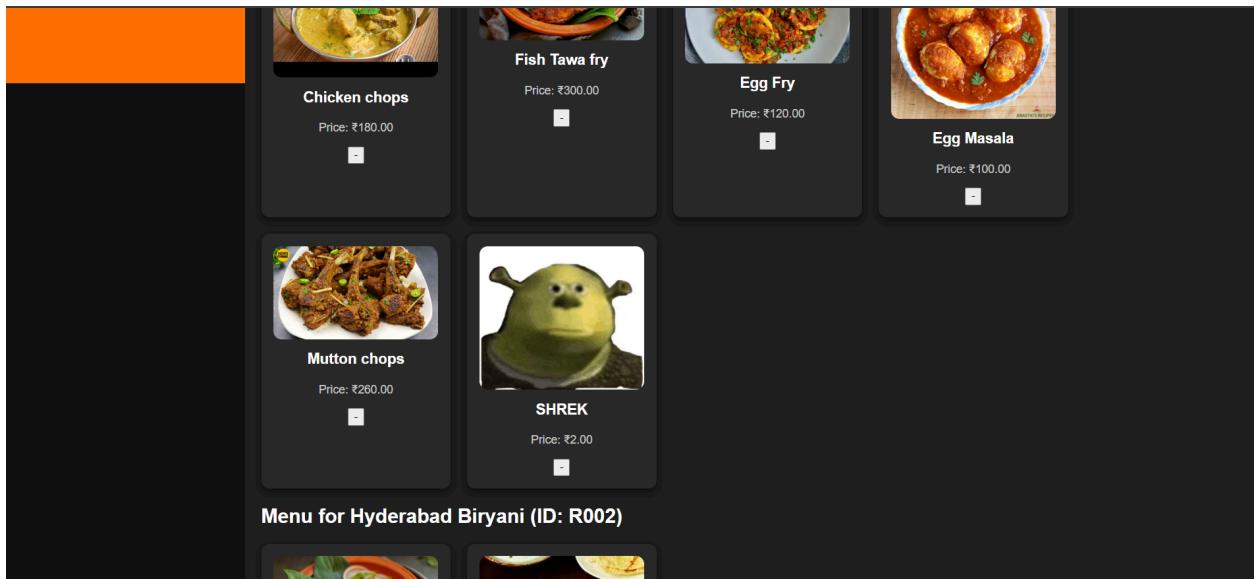
Delete Operations

1. Delete a Menu Item

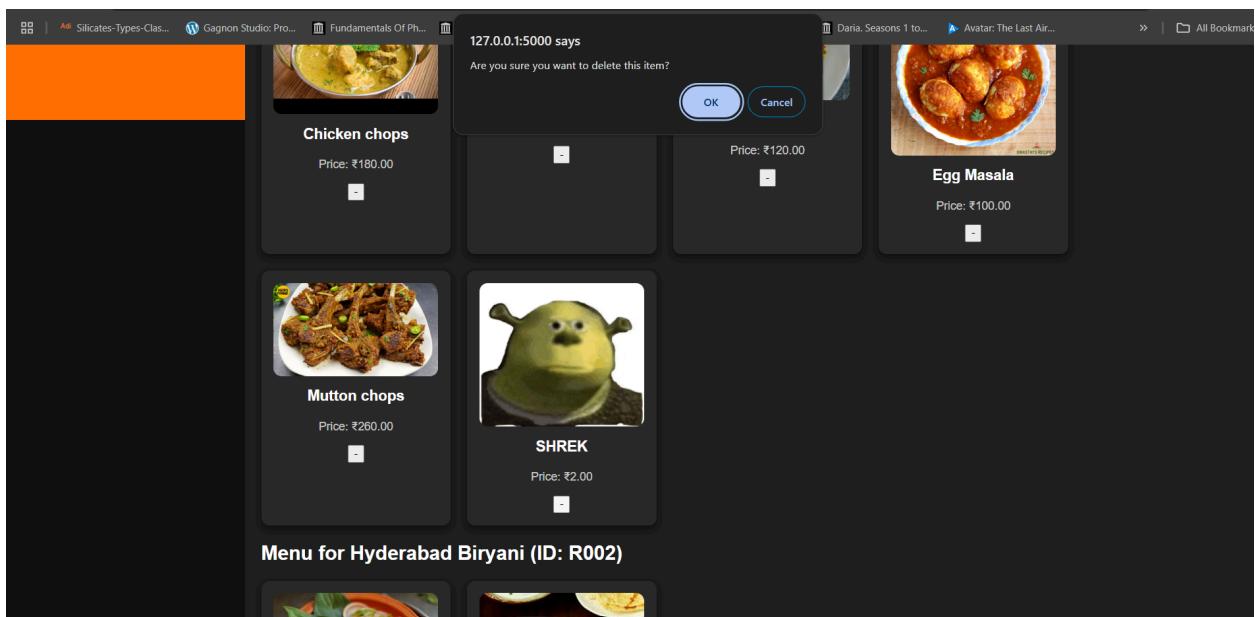
```
DELETE FROM menu WHERE Res_ID = %s AND Item_name = %s AND Price = %s
```

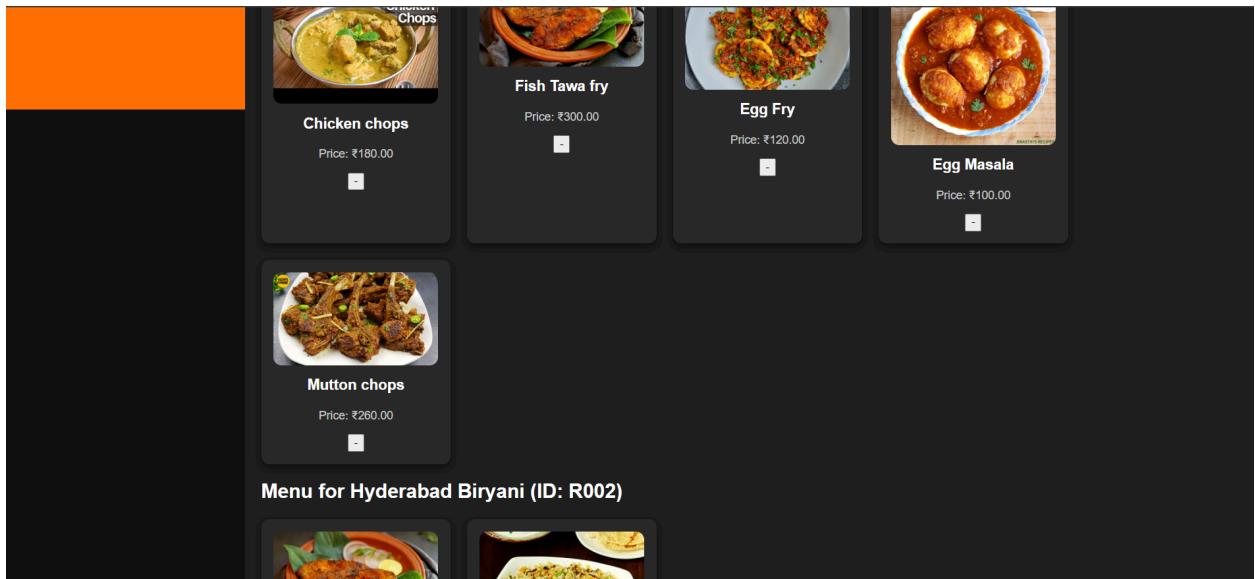
- Deletes a specific menu item from a restaurant's menu based on restaurant ID, item name, and price.

Trying to delete shrek from menu by pressing the '-' button



After delete





FUNCTIONS:

The `CalculateTotalPrice` function calculates the total price for an order by summing the cost of each item's quantity and price.

DELIMITER \$\$

DROP FUNCTION IF EXISTS `CalculateTotalPrice` \$\$

```

CREATE FUNCTION CalculateTotalPrice(order_id VARCHAR(20))
RETURNS DECIMAL(10,2)
DETERMINISTIC
BEGIN
    DECLARE total_amount DECIMAL(10,2) DEFAULT 0;

    SELECT SUM(oi.quantity * m.Price)
    INTO total_amount
    FROM orderitems oi
    JOIN menu m ON oi.R_ID = m.Res_ID AND oi.ItemID = m.ItemID
    WHERE oi.Order_id = order_id;

    RETURN total_amount;
END $$

DELIMITER ;

```

Declare Variable: Initializes `total_amount` to store the total cost.

Calculate Total:

- Joins `orderitems` (`oi`) and `menu` (`m`) on `R_ID` and `ItemID` to match restaurant and item IDs.
- Multiplies each item's `quantity` by its `price` and sums the results for the specified `order_id`.

Return Total: Returns `total_amount` as the total order cost.

```
mysql> select * from orders;
+-----+-----+-----+-----+-----+
| OrderID | Order_date | Passenger_id | R_ID | S_ID |
+-----+-----+-----+-----+-----+
| a1dbea0c | 2024-11-12 | M7S8B19Y48 | R001 | S001 |
| ae5e6c3a | 2024-11-12 | M7S8B19Y48 | R001 | S001 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql> SELECT CalculateTotalPrice('a1dbea0c');
+-----+
| CalculateTotalPrice('a1dbea0c') |
+-----+
|           600.00 |
+-----+
1 row in set (0.00 sec)
```

TRIGGER:

```
DROP TRIGGER IF EXISTS update_menu_quantity;
```

```
DELIMITER //
```

```
CREATE TRIGGER update_menu_quantity
AFTER INSERT ON orderitems
FOR EACH ROW
BEGIN
    DECLARE current_quantity INT;

    -- Fetch the current stock of the ordered item
    SELECT quantity INTO current_quantity
    FROM menu
    WHERE ItemID = NEW.ItemID AND Res_ID = NEW.R_ID;
    -- Validate stock availability
    IF current_quantity >= NEW.quantity THEN
        -- Deduct ordered quantity from stock
```

```

UPDATE menu
SET quantity = quantity - NEW.quantity
WHERE ItemID = NEW.ItemID AND Res_ID = NEW.R_ID;
ELSE
-- Raise error if stock is insufficient
SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'Insufficient stock for the requested
quantity.';
END IF;
END //
DELIMITER ;

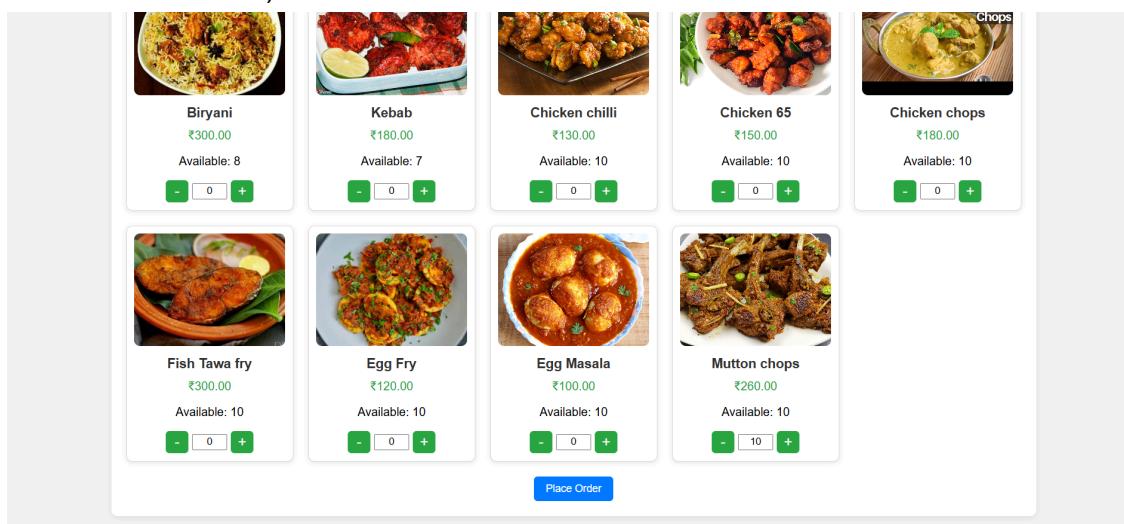
```

This trigger, `update_menu_quantity`, is triggered after a new row is inserted into the `orderitems` table:

- **Purpose:** It checks if there's enough stock in the `menu` table for the ordered item. If there is, it reduces the item's quantity in the `menu` table accordingly. If not, it raises an error to indicate insufficient stock.
- **Key Steps:**
 - The `current_quantity` of the item is fetched from the `menu` table.
 - The trigger checks if this stock is enough for the new order's quantity.
 - If sufficient, the `menu` quantity is decreased; if insufficient, an error message is raised with `SIGNAL`.

FRONTEND:

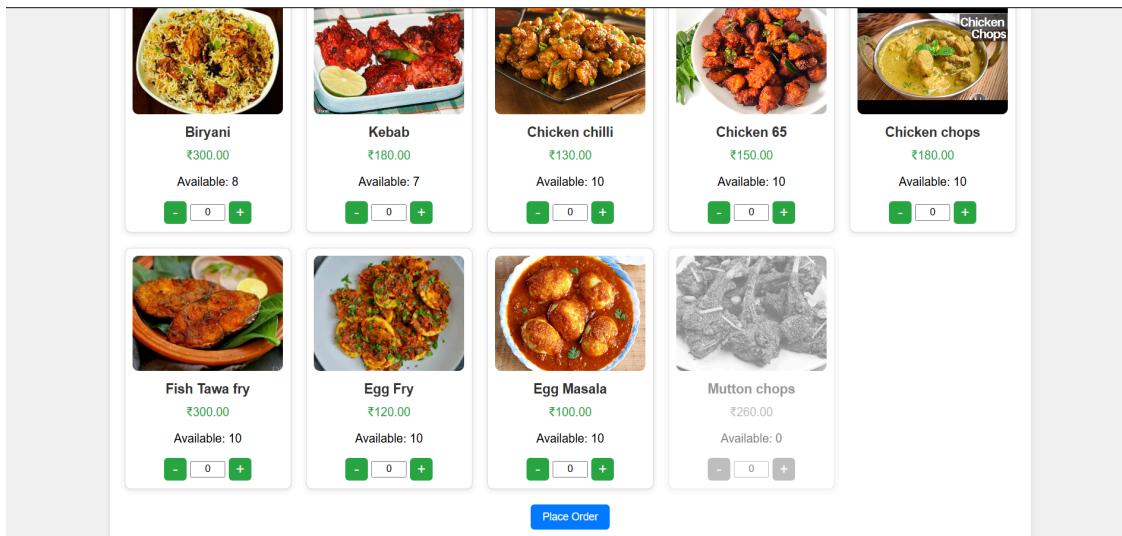
Food Item Mutton Chops is being ordered (10 quantity which is equal to available amount also reflected in backend)



```
mysql> select Res_ID,ItemID,Item_name,Price,quantity from menu
```

Res_ID	ItemID	Item_name	Price	quantity
R001	I001	Biryani	300.00	8
R001	I005	Kebab	180.00	7
R001	I006	Chicken chilli	130.00	10
R001	I007	Chicken 65	150.00	10
R001	I008	Chicken chops	180.00	10
R001	I009	Fish Tawa fry	300.00	10
R001	I010	Egg Fry	120.00	10
R001	I011	Egg Masala	100.00	10
R001	I012	Mutton chops	260.00	10

AFTER ORDER IS PLACED



BACKEND:

```
mysql> select Res_ID,ItemID,Item_name,Price,quantity from menu;
```

Res_ID	ItemID	Item_name	Price	quantity
R001	I001	Biryani	300.00	8
R001	I005	Kebab	180.00	7
R001	I006	Chicken chilli	130.00	10
R001	I007	Chicken 65	150.00	10
R001	I008	Chicken chops	180.00	10
R001	I009	Fish Tawa fry	300.00	10
R001	I010	Egg Fry	120.00	10
R001	I011	Egg Masala	100.00	10
R001	I012	Mutton chops	260.00	0

2)

```
DELIMITER $$
```

```
CREATE TRIGGER update_last_modified
BEFORE UPDATE ON menu
FOR EACH ROW
BEGIN
    SET NEW.last_modified = CURRENT_TIMESTAMP;
END$$
```

```
DELIMITER ;
```

This trigger automatically updates the last_modified column to the current timestamp whenever a row in the menu table is updated.

It is a BEFORE UPDATE trigger, meaning it fires before any update occurs.

The trigger sets the last_modified field to CURRENT_TIMESTAMP for the updated row.

This ensures that the last_modified column is always up-to-date with the current time whenever a row in the menu table is modified.

BEFORE UPDATE:

```
Database changed
mysql> select Item_name, last_modified from menu
+-----+-----+
| Item_name        | last_modified      |
+-----+-----+
| Biryani          | 2024-11-13 12:32:18 |
| Kebab            | 2024-11-13 12:32:18 |
| Chicken chilli   | 2024-11-13 12:32:18 |
| Chicken 65       | 2024-11-13 12:32:18 |
| Chicken chops    | 2024-11-13 12:32:18 |
| Fish Tawa fry    | 2024-11-13 12:32:18 |
| Egg Fry          | 2024-11-13 12:32:18 |
| Egg Masala       | 2024-11-13 12:32:18 |
| Mutton chops     | 2024-11-13 12:33:15 |
| Fish Fry          | 2024-11-13 12:32:18 |
| Biriyanı          | 2024-11-13 12:32:18 |
| French Fries     | 2024-11-13 12:32:18 |
```

AFTER UPDATE:

Item_name	last_modified
Biryani	2024-11-13 12:32:18
Kebab	2024-11-13 12:32:18
Chicken chilli	2024-11-13 12:32:18
Chicken 65	2024-11-13 12:32:18
Chicken chops	2024-11-13 12:32:18
Fish Tawa fry	2024-11-13 12:32:18
Egg Fry	2024-11-13 12:32:18
Egg Masala	2024-11-13 12:32:18
Mutton chops	2024-11-13 12:34:06
shrek	2024-11-13 12:34:59
Fish Fry	2024-11-13 12:32:18
Riviera	2024-11-13 12:32:18

NESTED QUERY:

```
SELECT m.Item_name, m.Price, r.Rname
FROM menu m
JOIN restaurant r ON m.Res_ID = r.RID
WHERE m.Price > (
    SELECT AVG(Price)
    FROM menu
    WHERE Res_ID = %s
)
AND m.Res_ID = %s
```

```

mysql> SELECT m.Item_name, m.Price, r.Rname
-> FROM menu m
-> JOIN restaurant r ON m.Res_ID = r.RID
-> WHERE m.Price > (
->     SELECT AVG(Price)
->     FROM menu
->     WHERE Res_ID = 'R001'
-> )
-> AND m.Res_ID = 'R001';
+-----+-----+-----+
| Item_name | Price | Rname |
+-----+-----+-----+
| Biryani   | 300.00 | Donne Biryani |
| Fish Tawa fry | 300.00 | Donne Biryani |
| Mutton chops | 260.00 | Donne Biryani |
+-----+-----+-----+
3 rows in set (0.00 sec)

```

This query retrieves the names, prices, and restaurant names of items from a restaurant's menu where the item's price is greater than the restaurant's average menu price.

1. **Subquery:**

- `SELECT AVG(Price) FROM menu WHERE Res_ID = %s`: Calculates the average price of all menu items for a specific restaurant.

2. **Outer Query:**

- `SELECT m.Item_name, m.Price, r.Rname`: Selects the item name, price, and restaurant name.
- `WHERE m.Price > (...) AND m.Res_ID = %s`: Filters items with a price greater than the average price calculated by the subquery for the given restaurant ID.

In short, it fetches items that are more expensive than the average price of that restaurant.

AGGREGATE QUERIES

1. Calculating the Average Price for a Specific Restaurant using '[AVG](#)'

```
SELECT AVG(Price) FROM menu WHERE Res_ID = rid
```

- **Aggregate Function Used:** `AVG()`
- **Purpose:** The `AVG()` function calculates the average price of all menu items for a specific restaurant, identified by `Res_ID`.

```

def restaurant_items_above_average():
    cursor = db.cursor()

    items = []
    average_price = None # Initialize the average price
    if request.method == 'POST':
        rid = request.form.get('rid')
        if rid:
            # Query to get the average price for the specified restaurant
            cursor.execute("""
                SELECT AVG(Price) FROM menu WHERE Res_ID = %s
            """, (rid,))
            average_price = cursor.fetchone()[0]

            # Query to get items whose price is greater than the average price of items in the specified restaurant
            cursor.execute("""
                SELECT m.Item_name, m.Price, r.Rname
                FROM menu m
                JOIN restaurant r ON m.Res_ID = r.RID
                WHERE m.Price > %s
                AND m.Res_ID = %s
            """, (average_price, rid))
            items = cursor.fetchall()

    cursor.close()
    db.close()

```

The query retrieves the average price of items from the `menu` table where the `Res_ID` matches the given `rid`.

It retrieves the details of items whose prices are greater than the average price calculated for a specific restaurant.

2. Calculating the total price of an order using ‘`SUM`’

```

SELECT SUM(oi.quantity * m.Price)
INTO total_amount
FROM orderitems oi
JOIN menu m ON oi.R_ID = m.Res_ID AND oi.ItemID = m.ItemID
WHERE oi.Order_id = order_id;

```

- **Aggregate Function Used:** `SUM()`
- **Purpose:** The `SUM()` function calculates the total amount for an order by adding up the cost of each item in the order.

The query multiplies the `quantity` of each item (`oi.quantity`) in the `orderitems` table by the `Price` of the item (`m.Price`) from the `menu` table.

The resulting sum, representing the total price of all items in the specified order

TABLES

```
mysql> use treatsontracks;
Database changed
mysql> show tables;
+-----+
| Tables_in_treatsontracks |
+-----+
| login
| menu
| orderitems
| orders
| passenger
| payment
| restaurant
| station
| stops
| train
+-----+
10 rows in set (0.00 sec)
```

PASSENGER

	PassengerID	Fname	Lname	Phone	email
▶	0FOHT4VBZZ	Amitha	Reddy	8988445734	ami@gmail.com
	4YRNL5HTS2	Sravani	Revuri	7865478654	dbms@gmail.com
	5265KRZBV5	Shreya	Srinivasan	8794378376	shr@gmail.com
	5WTLIXH7MZ	f	f	0	f@gmail.com
	8WH55YWLFU	Varsha	Badri	9056765789	varsha@gmail.com
	9M0QLU4B12	Vismaya	M	9975057977	vi@gmail.com
	B3WMTSNEFE	c	c	7975050977	vip@gmail.com
	DYGXQ87ECH	Varsha	Jyothsna	8786746542	jyo@gmail.com
	H95XHG2J52	Vismaya	Murali	8884888902	sql@gmail.com
	KA62M4K5WN	s	s	9000875064	s@gmail.com
	PR2BJPAKOF	Aishwa...	Chandana	8983465237	ais@gmail.com
	SPNSKVB06N	a	a	9535023936	a@gmail.com
	UYCOTRNF8R	abc	abc	7975057976	vi5@gmail.com

LOGIN

	LoginID	Password	user_id	is_admin
▶	a	a	SPNSKVB06N	1
Sravani	s rav@123		4YRNL5HTS2	1
Varsha12	varsha321		DYGXQ8TECH	1
vichu	vm123		VZ8B22KW8R	1
vismaya	123		Y38ZHWNV35	1
Vismaya-M	vis@123		H95XHG2J52	1
Aishu	aishu12		PR2BJPAKOF	0
Amitha	ami@123		OFOHT4VBZZ	0
s	s		KA62M4K5WN	0
shreya	shrey@123		5265KRZBV5	0
Varsha	var@123		8WH55YWLUF	0
*	NULL	NULL	NULL	NULL

login 1 ×

MENU TABLE

	Res_ID	ItemID	Item_name	Price	Image	quantity	last_modified
▶	R001	I001	Biryani	300.00	BLOB	2	2024-11-13 12:32:18
	R001	I005	Kebab	180.00	BLOB	5	2024-11-13 12:32:18
	R001	I006	Chicken chilli	130.00	BLOB	8	2024-11-13 12:32:18
	R001	I007	Chicken 65	150.00	BLOB	10	2024-11-13 12:32:18
	R001	I008	Chicken chops	180.00	BLOB	10	2024-11-13 12:32:18
	R001	I009	Fish Tawa fry	300.00	BLOB	10	2024-11-13 12:32:18
	R001	I010	Egg Fry	120.00	BLOB	10	2024-11-13 12:32:18
	R001	I011	Egg Masala	100.00	BLOB	9	2024-11-13 12:32:18
	R001	I012	Mutton chops	260.00	BLOB	6	2024-11-13 12:34:06
	R001	I088	shrek	2.00	BLOB	20	2024-11-13 12:34:59
	R002	I002	Fish Fry	450.00	BLOB	10	2024-11-13 12:32:18
	R002	I005	Biriyani	300.00	BLOB	10	2024-11-13 12:32:18

ORDERS TABLE

	OrderID	Order_date	Passenger_id	R_ID	S_ID
▶	22a6ff73	2024-11-12	KA62M4K5WN	R001	S001
	3c916d7f	2024-11-11	KA62M4K5WN	R004	S004
	5152b62f	2024-11-12	KA62M4K5WN	R001	S001
	53aa5981	2024-11-12	KA62M4K5WN	R001	S001
	6166ff5b	2024-11-12	KA62M4K5WN	R001	S001
	8acf27da	2024-11-12	KA62M4K5WN	R001	S001
	936db8bc	2024-11-12	KA62M4K5WN	R001	S001
	ad7da0f3	2024-11-12	KA62M4K5WN	R001	S001
	cf24e4c3	2024-11-12	KA62M4K5WN	R004	S004
	dab37cd8	2024-11-12	KA62M4K5WN	R001	S001
	dafbbd85	2024-11-10	KA62M4K5WN	R003	S001
	efdd2e47	2024-11-12	KA62M4K5WN	R001	S001
*	NULL	NULL	NULL	NULL	NULL

orders 1 ×

PAYMENT TABLE

	order_id	paymentID	payment_method	date
▶	22a6ff73	d85467dc	DebitCard	2024-11-12
	3c916d7f	c6e6aa4c	DebitCard	2024-11-11
	5152b62f	55e94d94	BankTransfer	2024-11-12
	6166ff5b	32fdb300	CreditCard	2024-11-12
	936db8bc	8db48b79	BankTransfer	2024-11-12
	cf24e4c3	3616b8f6	DebitCard	2024-11-12
	dab37cd8	af29197c	Cash	2024-11-12
	dafbbd85	53ba67eb	DebitCard	2024-11-10
*	NULL	NULL	NULL	NULL

RESTAURANTS

	RID	Rname	Location	Phno	Station_id
▶	R001	Donne Biryani	Bangalore	9876543212	S001
	R002	Hyderabad Biryani	Hyderabad	9871203456	S003
	R003	Burger King	Bangalore	9123456789	S001
	R004	Nandhana Palace	Mysore	7979075750	S004
	R005	Meghana Foods	Chennai	9595035350	S002
	R006	Paradise Biryani	Mysore	8197181971	S004
	R007	Nagarjuna's	Hyderabad	6780998769	S003
	R008	Taaza Upahar	Chennai	7864350298	S002
*	NULL	NULL	NULL	NULL	NULL

STATIONS

	StationID	Sname
▶	S001	Bangalore
	S002	Chennai
	S003	Hyderabad
	S004	Mysore
*	NULL	NULL

TRAINS

	TrainID	TrainName
▶	T001	ExpressOne
	T004	Hindustanraill
	T002	SuperFast
	T003	Wondertrain
*	NULL	NULL

STOPS

	Train_id	Station_id
▶	T001	S001
	T002	S001
	T003	S001
	T004	S001
	T001	S002
	T004	S002
	T002	S003
	T003	S003
	T002	S004
	T003	S004
	T004	S004
*	NULL	NULL

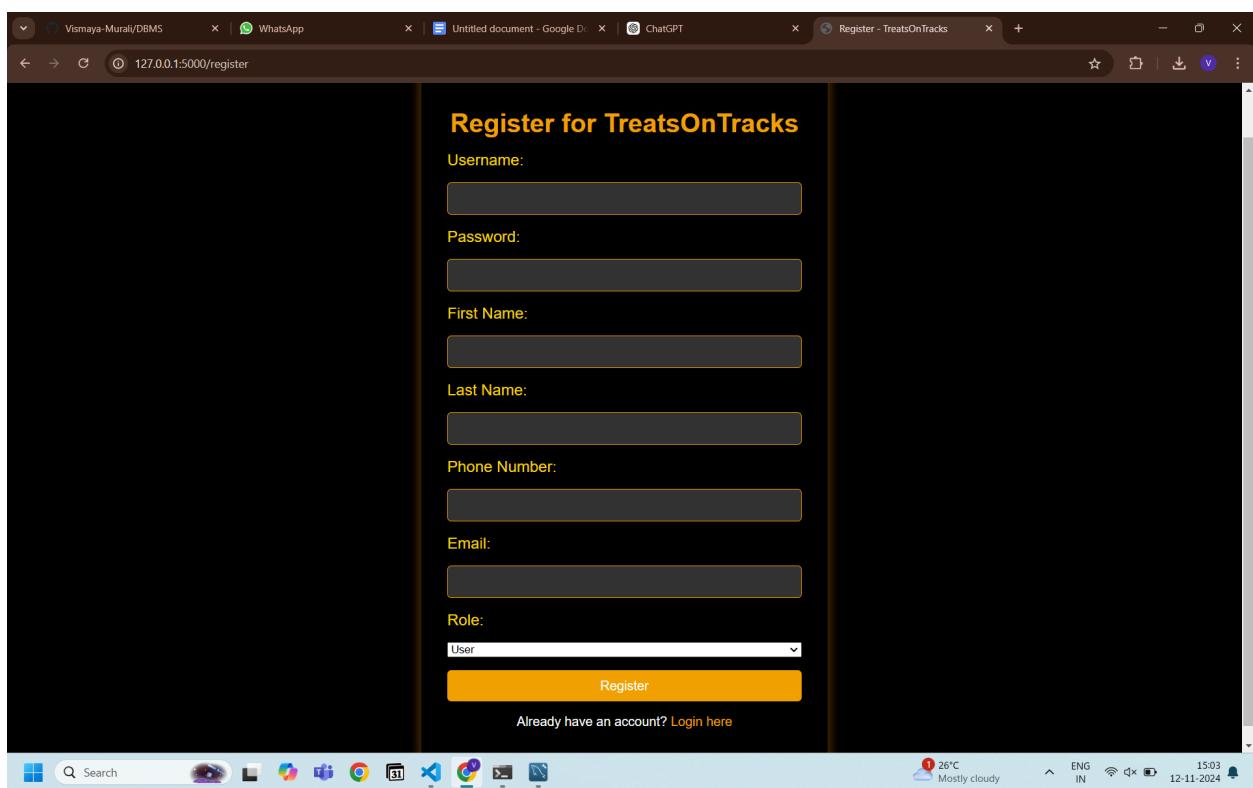
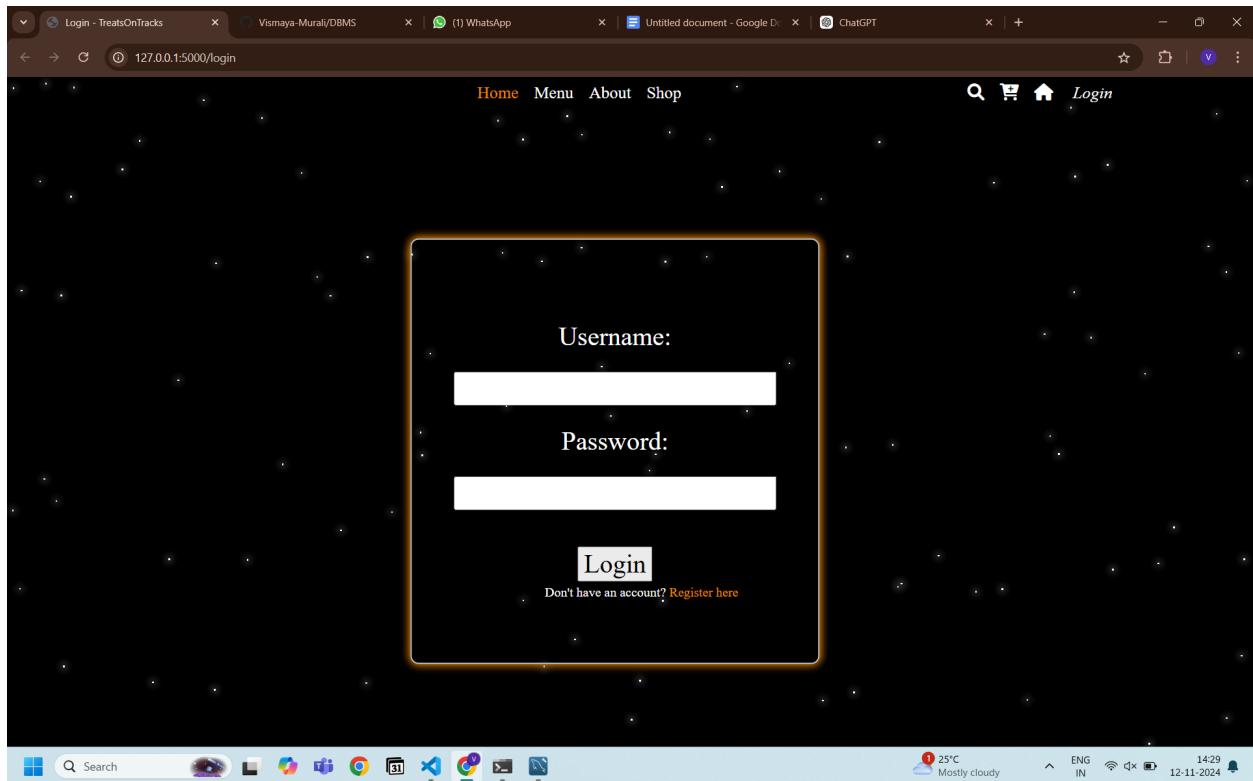
stops 1 ×

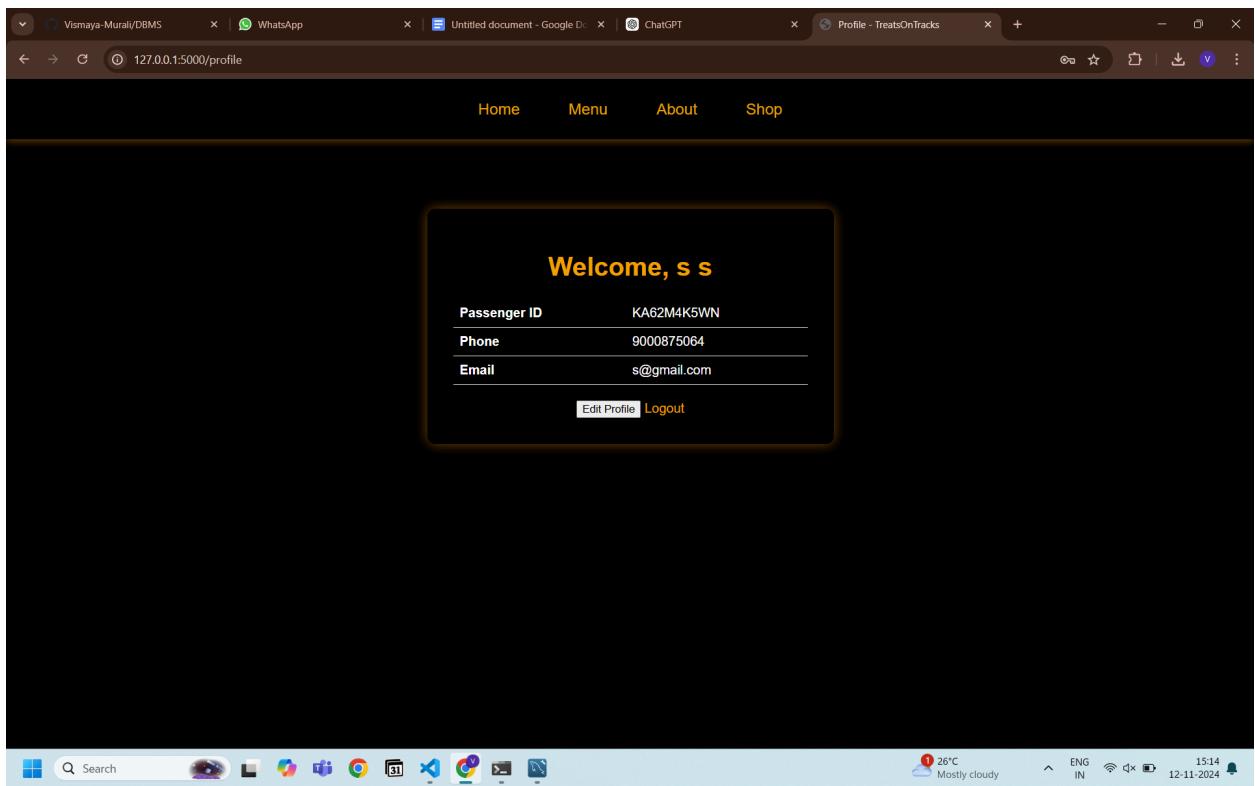
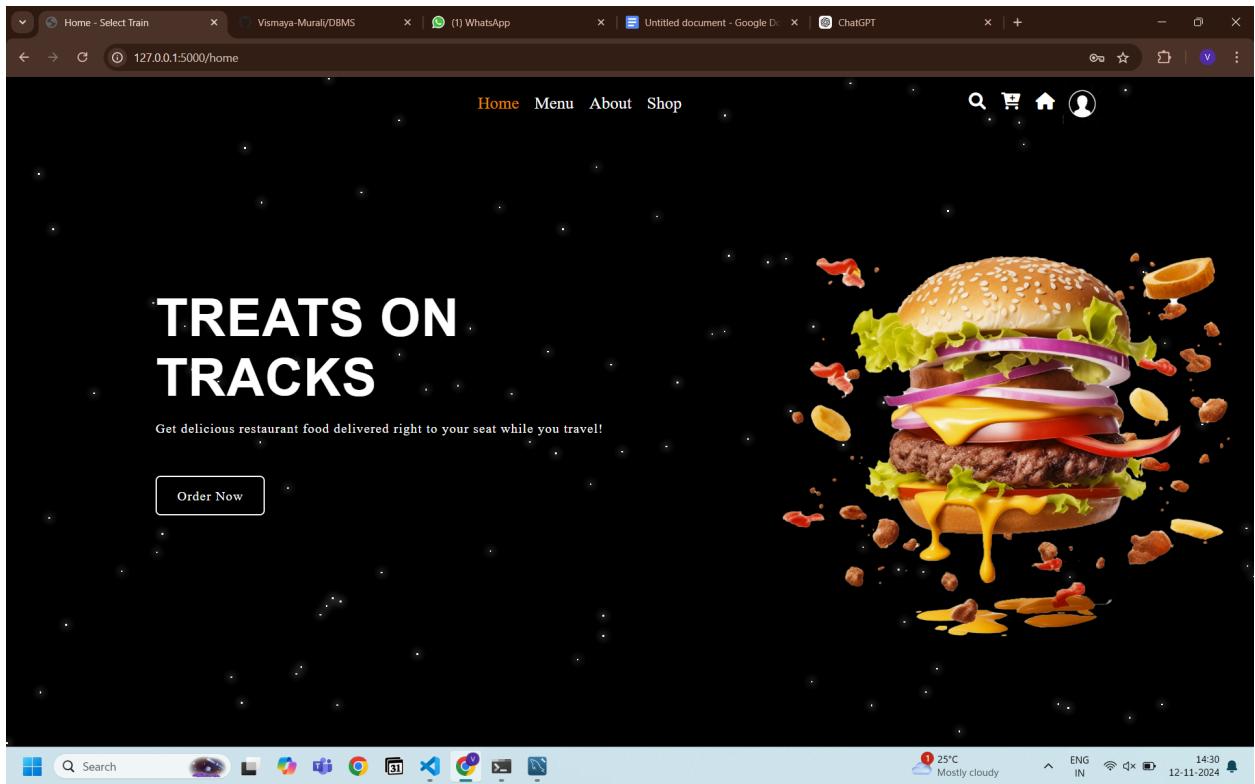
ORDER_ITEMS

	OrdItemID	ItemPrice	quantity	Order_id	R_ID	ItemID
▶	0557dafb	300.00	8	8acf27da	R001	I001
	0c519111	300.00	1	58b0cb6e	R001	I009
	382af58b	180.00	1	cb91dfd2	R001	I005
	39479bc6	300.00	1	53aa5981	R001	I001
	3a362e80	300.00	1	fe1a86f9	R001	I009
	3ec8f621	250.00	2	3c916d7f	R004	I032
	4dc470a7	130.00	1	efdd2e47	R001	I006
	57b8059a	180.00	3	5152b62f	R001	I005
	5934a100	350.00	1	cf24e4c3	R004	I033
	599182e2	130.00	1	01735ed9	R001	I006
	5a6471a4	300.00	1	03e96a1b	R001	I009
	6ebc8bf1	350.00	1	3c916d7f	R004	I033
	742e0df9	150.00	2	53aa5981	R001	I007

orderitems 1 ×

FRONTEND





The screenshot shows a web browser window with multiple tabs open at the top. The active tab is titled "Profile - TreatsOnTracks" and has the URL "127.0.0.1:5000/profile". The main content area displays a profile editing form with a yellow header "Welcome, s s". The form includes fields for Passenger ID (KA62M4K5WN), Phone (9000875064), Email (s@gmail.com), and a "Edit Profile" button. Below these are input fields for First Name ("s") and Last Name ("s"). Further down are fields for Phone Number (9000875064) and Email (s@gmail.com). At the bottom of the form are "Update Profile" and "Logout" buttons.

The screenshot shows a web browser window with multiple tabs open at the top. The active tab is titled "Select Train" and has the URL "127.0.0.1:5000/select_stops". The main content area displays a heading "Select a Train" above a list of train names. The list consists of five items: "ExpressOne", "Hindustanraill", "SuperFast", and "Wondertrain". The first item, "ExpressOne", is highlighted with a yellow background, while the others have black backgrounds.

A screenshot of a web browser window titled "Train Stops for Train T004". The URL in the address bar is "127.0.0.1:5000/select_station". The page has a dark background with orange header text. At the top, there is a navigation bar with links for Home, Menu, About, and Shop. Below the navigation bar, the title "Stops for Train T004" is displayed in large white font. A table with a single column titled "Station Name" lists three stops: Bangalore, Chennai, and Mysore.

Station Name
Bangalore
Chennai
Mysore

The browser's taskbar at the bottom shows various open tabs and system icons.

A screenshot of a web browser window titled "Restaurants at S001". The URL in the address bar is "127.0.0.1:5000/restaurants_at_station". The page has a dark background with orange header text. At the top, there is a navigation bar with links for Home, Menu, About, and Shop. Below the navigation bar, the title "Available Restaurants at S001" is displayed in large white font. A table with two columns, "Restaurant Name" and "Phone Number", lists two restaurants: Donne Biryani and Burger King.

Restaurant Name	Phone Number
Donne Biryani	9876543212
Burger King	9123456789

The browser's taskbar at the bottom shows various open tabs and system icons.

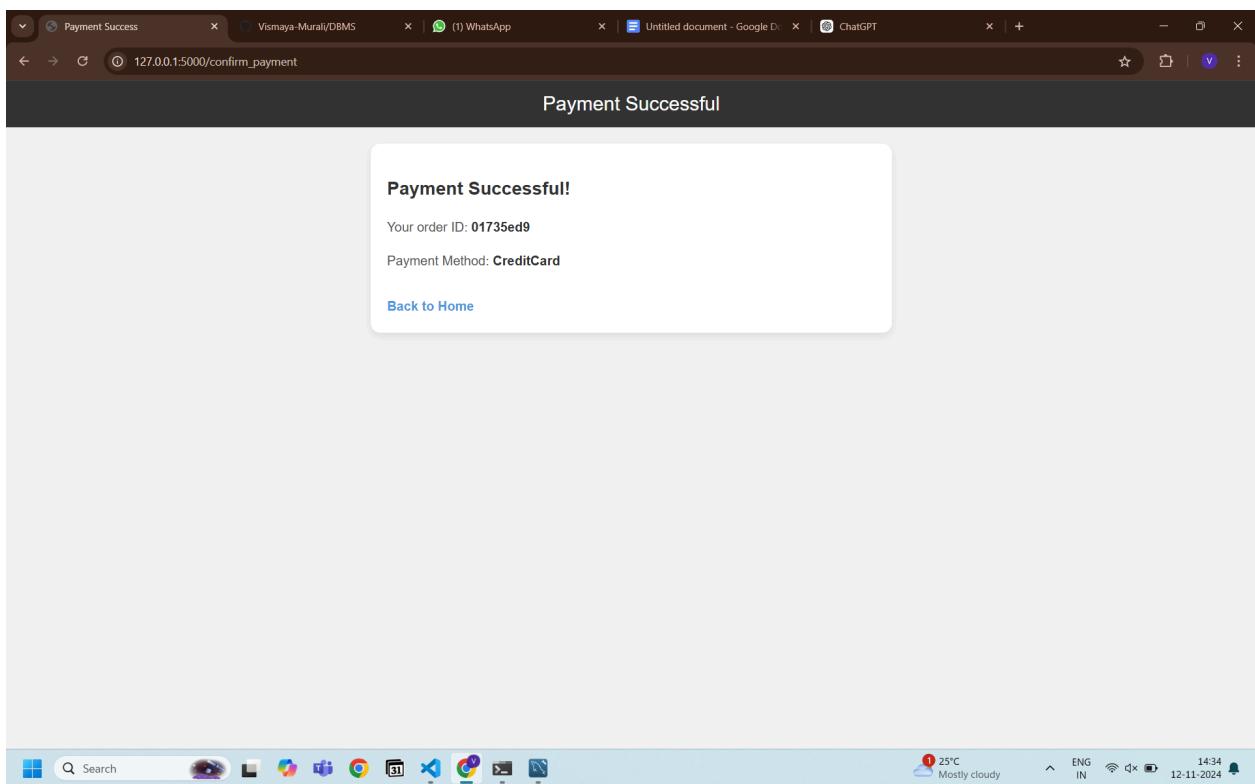
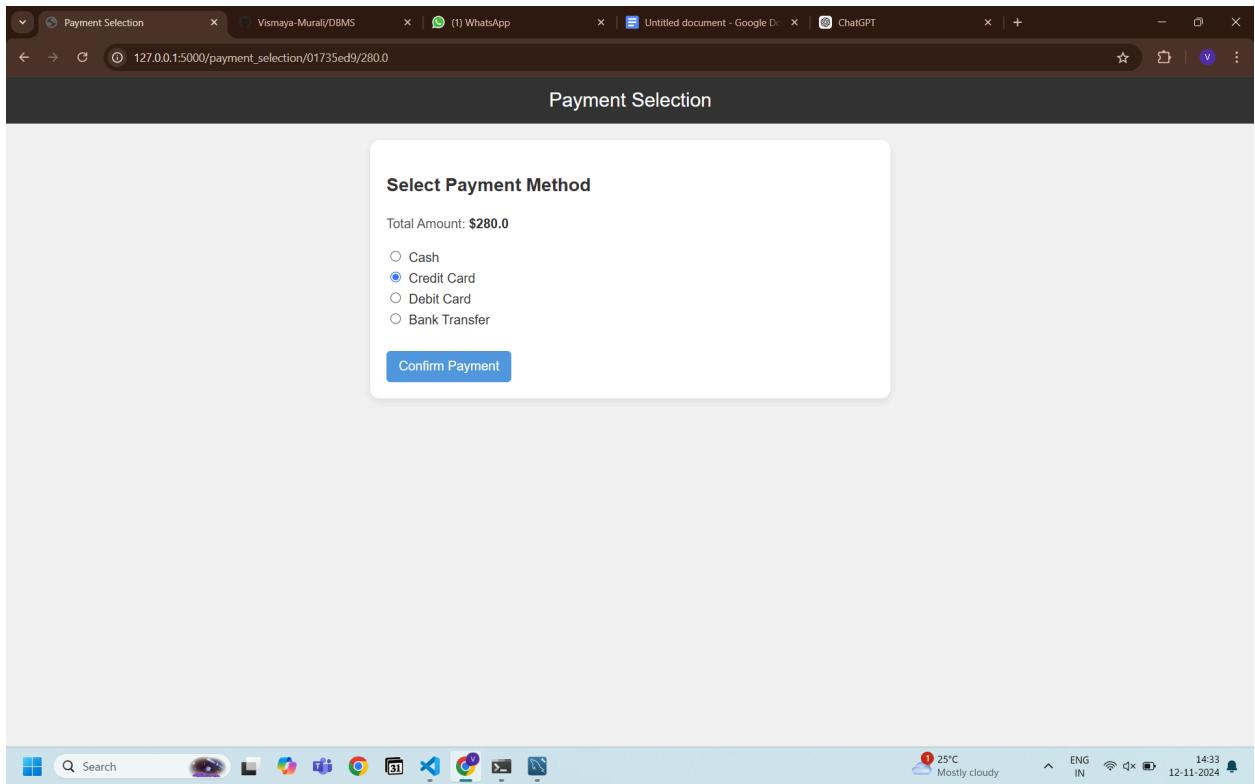
Menu for R003

 French Fries ₹90.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 BBQ Burrito ₹350.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Cheese Burger ₹250.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Veg Burger ₹220.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Chicken Burger ₹270.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>
 Double Patty Burger ₹350.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Fish Burger ₹280.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Spicy Chicken Burger ₹300.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Onion Rings ₹120.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 French Fries Large ₹150.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>

Menu for R001

 Biryani ₹300.00 Available: 5 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Kebab ₹180.00 Available: 2 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Chicken chilli ₹130.00 Available: 6 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Chicken 65 ₹150.00 Available: 8 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Chicken chops ₹180.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>
 Fish Tawa fry ₹300.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Egg Fry ₹120.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Egg Masala ₹100.00 Available: 10 <button>-</button> <input type="text" value="0"/> <button>+</button>	 Mutton chops ₹260.00 Available: 0 <button>-</button> <input type="text" value="0"/> <button>+</button>	

Place Order



ADMIN

The screenshot shows the Admin Dashboard for FoodDesk. The left sidebar, titled "FoodDesk Admin", contains links for Dashboard, Update Restaurant, Update Menu, and Restaurant Statistics. The main dashboard area displays a welcome message: "Welcome to the admin dashboard." The system status bar at the bottom indicates a temperature of 25°C, weather as mostly cloudy, and the date/time as 12-11-2024 14:42.

The screenshot shows the Admin Dashboard with the "Restaurant Management" section active. The left sidebar remains the same. The main area displays a grid of eight restaurant entries, each in a card-like format with an "Update" button below it. The restaurants listed are:

Restaurant Name	Location	Phone Number	Action
Donne Biryani	Bangalore	9876543212	Update
Hyderabad Biryani	Hyderabad	9871203456	Update
Burger King	Bangalore	9123456789	Update
Nandhana Palace	Mysore	7979075750	Update
Meghana Foods	Chennai	9595035350	Update
Paradise Biryani	Mysore	8197181971	Update
Nagarjuna's	Hyderabad	6780998769	Update
Taaza Upahar	Chennai	7864350298	Update

The system status bar at the bottom indicates a temperature of 25°C, weather as mostly cloudy, and the date/time as 12-11-2024 14:43.

FoodDesk Admin

Restaurant Management

Restaurant Name: Donne Biryani
Location: Bangalore
Phone Number: 9876543212
[Update](#)

Restaurant Name: Hyderabad Biryani
Location: Hyderabad
Phone Number: 9123456789
[Update](#)

Restaurant Name: Burger King
Location: Bangalore
Phone Number: 7979075750
[Update](#)

Restaurant Name: Nandhana Palace
Location: Mysore
Phone Number: 9123456789
[Update](#)

Restaurant Name: Meghana Foods
Location: Chennai
Phone Number: 9595035350
[Update](#)

Restaurant Name: Tuna's
Location: Hyderabad
Phone Number: 6780998769
[Update](#)

Restaurant Name: Taaza Upahar
Location: Chennai
Phone Number: 7864350298
[Update](#)

Update Restaurant

Restaurant Name: Burger King
Location: Bangalore
Phone Number: 9123456789
[Submit](#) [Cancel](#)

FoodDesk Admin

Menu Management

Restaurant ID: Item ID: Item Name: Price: Image:
 Choose File
Quantity: Add/Update Item

Menu for Donne Biryani (ID: R001)

 Biryani Price: ₹300.00	 Kebab Price: ₹180.00	 Chicken chilli Price: ₹130.00	 Chicken 65 Price: ₹150.00
 Chicken chops Price: ₹180.00	 Fish Tawa fry Price: ₹300.00	 Egg Fry Price: ₹120.00	 Egg Masala

Admin Dashboard - FoodDesk | Vismaya-Murali/DBMS | WhatsApp | Untitled document - Google Docs | ChatGPT

127.0.0.1:5000/admin_dashboard

FoodDesk Admin

- Dashboard
- Update Restaurant
- Update Menu
- Restaurant Statistics

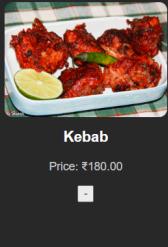
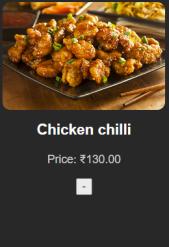
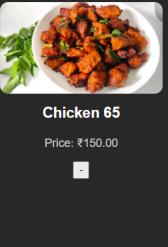
Menu Manager

127.0.0.1:5000 says
Menu item successfully updated.

OK

Restaurant ID R001 | Choose File | WhatsApp I... 4 01 AM.JP | Price: 310 | Image

Menu for Donne Biryani (ID: R001)

 Biryani Price: ₹300.00	 Kebab Price: ₹180.00	 Chicken chilli Price: ₹130.00	 Chicken 65 Price: ₹150.00
 Chicken chops Price: ₹180.00	 Fish Tawa fry Price: ₹300.00	 Egg Fry Price: ₹120.00	 Egg Masala

Search 25°C Mostly cloudy ENG IN 14:44 12-11-2024

Restaurant Items Above Average | Vismaya-Murali/DBMS | WhatsApp | Untitled document - Google Docs | ChatGPT

127.0.0.1:5000/restaurant_items_above_average

Items with Price Above Average in Restaurant

Enter Restaurant ID:

Get Items

Average Price: ₹191.11

Results:

Item Name	Price	Restaurant Name
Biryani	300.00	Donne Biryani
Fish Tawa fry	300.00	Donne Biryani
Mutton chops	260.00	Donne Biryani

Search 25°C Mostly cloudy ENG IN 14:43 12-11-2024