

# MySQL Project: Zomato Database

## Step 1: Database Schema Design

Create a database named `zomato`:

```
CREATE DATABASE zomato;  
USE zomato;
```

## Step 2: Creating Tables

### 1. Users Table

- Stores information about the users of the app.

```
CREATE TABLE Users (  
    user_id INT PRIMARY KEY AUTO_INCREMENT,  
    username VARCHAR(50) NOT NULL,  
    email VARCHAR(100) NOT NULL UNIQUE,  
    phone VARCHAR(15),  
    address TEXT  
);
```

### 2. Restaurants Table

- Stores details of the restaurants listed on the platform.

```
CREATE TABLE Restaurants (  
    restaurant_id INT PRIMARY KEY AUTO_INCREMENT,  
    name VARCHAR(100) NOT NULL,  
    location VARCHAR(100),  
    rating FLOAT CHECK (rating >= 0 AND rating <= 5),  
    cuisine VARCHAR(50),  
    contact VARCHAR(15)  
);
```

### 3. Menu\_Items Table

- Stores information about the menu items offered by each restaurant.

```
CREATE TABLE Menu_Items (  
    item_id INT PRIMARY KEY AUTO_INCREMENT,  
    restaurant_id INT,  
    item_name VARCHAR(100) NOT NULL,  
    price DECIMAL(8, 2) NOT NULL,  
    description TEXT,  
    FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id) ON  
DELETE CASCADE  
);
```

### 4. Orders Table

- Manages information about customer orders.

```
CREATE TABLE Orders (  
    order_id INT PRIMARY KEY AUTO_INCREMENT,  
    user_id INT,  
    restaurant_id INT,  
    order_date DATETIME DEFAULT CURRENT_TIMESTAMP,  
    status ENUM('Pending', 'Completed', 'Cancelled') DEFAULT 'Pending',  
    total_price DECIMAL(8, 2),  
    FOREIGN KEY (user_id) REFERENCES Users(user_id) ON DELETE CASCADE,  
    FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id) ON  
DELETE CASCADE  
);
```

## 5. Order\_Items Table

- Manages individual items in an order (many-to-many relationship between Orders and Menu\_Items).

```
CREATE TABLE Order_Items (  
    order_item_id INT PRIMARY KEY AUTO_INCREMENT,  
    order_id INT,  
    item_id INT,  
    quantity INT DEFAULT 1,  
    price DECIMAL(8, 2),  
    FOREIGN KEY (order_id) REFERENCES Orders(order_id) ON DELETE CASCADE,  
    FOREIGN KEY (item_id) REFERENCES Menu_Items(item_id) ON DELETE CASCADE  
);
```

## 6. Reviews Table

- Stores reviews from users for restaurants.

```
CREATE TABLE Reviews (  
    review_id INT PRIMARY KEY AUTO_INCREMENT,  
    user_id INT,  
    restaurant_id INT,  
    rating INT CHECK (rating >= 0 AND rating <= 5),  
    comments TEXT,  
    review_date DATETIME DEFAULT CURRENT_TIMESTAMP,  
    FOREIGN KEY (user_id) REFERENCES Users(user_id) ON DELETE CASCADE,  
    FOREIGN KEY (restaurant_id) REFERENCES Restaurants(restaurant_id) ON  
DELETE CASCADE  
);
```

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## Step 3: Inserting Sample Data

Add sample data to the tables to test functionality.

### Users Table

```
INSERT INTO Users (username, email, phone, address) VALUES  
('John Doe', 'john@example.com', '1234567890', '123 Main St'),  
('Jane Smith', 'jane@example.com', '0987654321', '456 Elm St');
```

```
mysql> SELECT * FROM Users;  
+-----+-----+-----+-----+-----+  
| user_id | username      | email                      | phone      | address                |  
+-----+-----+-----+-----+-----+  
| 1       | Jignesh Borse | jignesh.borse@example.com | 9876543210 | Kothrud, Pune          |  
| 2       | Gaurav Pawar  | gaurav.pawar@example.com  | 9765432109 | Baner, Pune            |  
| 3       | Rohit Savale  | rohit.savale@example.com   | 9654321098 | Wakad, Pune            |  
| 4       | Anubhaw Mishra | anubhaw.mishra@example.com | 9543210987 | Viman Nagar, Pune      |  
| 5       | Shravani Mohite | shravani.mohite@example.com | 9432109876 | Hinjewadi, Pune        |  
| 6       | Rimzim Thakral | rimzim.thakral@example.com | 9321098765 | Hadapsar, Pune         |  
| 7       | Dev Palkhe    | dev.palkhe@example.com     | 9210987654 | Kharadi, Pune          |  
| 8       | Ashish Raut   | ashish.raut@example.com    | 9109876543 | Magarpatta City, Pune  |  
| 9       | Pranamya Chavan | pranamya.chavan@example.com | 9008765432 | Shivaji Nagar, Pune    |  
| 10      | Parth Nalawade | parth.nalawade@example.com | 8987654321 | Aundh, Pune            |  
+-----+-----+-----+-----+-----+  
10 rows in set (0.00 sec)
```

## Restaurants Table

```
INSERT INTO Restaurants (name, location, rating, cuisine, contact) VALUES
('Pizza Palace', 'Downtown', 4.5, 'Italian', '1112223333'),
('Sushi World', 'Uptown', 4.8, 'Japanese', '2223334444');
```

```
mysql> SELECT * FROM Restaurants;
```

restaurant_id	name	location	rating	cuisine	contact
1	Spice Symphony	Kothrud, Pune	4.5	Indian	9876543210
2	Sushi Haven	Viman Nagar, Pune	4.8	Japanese	9765432109
3	Burger Kingdom	Aundh, Pune	4.2	American	9654321098
4	Pasta Paradise	Baner, Pune	4	Italian	9543210987
5	Veggie Delight	Hinjewadi, Pune	3.9	Vegetarian	9432109876
6	Tandoori Tales	Hadapsar, Pune	4.7	Mughlai	9321098765
7	The Wok Express	Kharadi, Pune	4.3	Chinese	9210987654
8	Dessert Bliss	Magarpatta City, Pune	4.6	Desserts	9109876543
9	Grill Master	Shivaji Nagar, Pune	4.1	Barbecue	9008765432
10	Cafe Mocha	Wakad, Pune	4.4	Cafe	8987654321

10 rows in set (0.00 sec)

## Menu\_Items Table

```
INSERT INTO Menu_Items (restaurant_id, item_name, price, description)
VALUES
(1, 'Margherita Pizza', 9.99, 'Classic cheese and tomato pizza'),
(1, 'Pepperoni Pizza', 12.99, 'Pepperoni pizza with mozzarella'),
(2, 'Salmon Sushi', 15.99, 'Fresh salmon nigiri sushi'),
(2, 'Tuna Sushi', 14.99, 'Fresh tuna nigiri sushi');
```

```
mysql> SELECT * FROM Menu_Items;
```

item_id	restaurant_id	item_name	price	description
1	1	Paneer Tikka	199.99	Grilled marinated paneer with spices
2	1	Butter Chicken	249.99	Chicken cooked in a rich, creamy tomato gravy
3	2	Salmon Sushi	399.99	Fresh salmon sushi with wasabi and soy sauce
4	2	Tuna Sushi	349.99	Fresh tuna sushi with a hint of wasabi
5	3	Cheese Burger	299.99	Classic American cheese burger with fries
6	3	French Fries	99.99	Crispy golden fries with ketchup
7	4	Spaghetti Carbonara	299.99	Classic Italian pasta with bacon and cheese
8	4	Margherita Pizza	399.99	Traditional pizza with tomato, mozzarella, and basil
9	5	Veg Biryani	249.99	Rice with mixed vegetables and aromatic spices
10	5	Aloo Paratha	149.99	Flatbread stuffed with spiced mashed potatoes

10 rows in set (0.00 sec)

## Orders Table

```
INSERT INTO Orders (user_id, restaurant_id, total_price, status) VALUES
(1, 1, 22.98, 'Completed'),
(2, 2, 30.98, 'Pending');
```

```
mysql> mysql> SELECT * FROM Orders;
```

order_id	user_id	restaurant_id	order_date	status	total_price
1	1	1	2025-01-26 23:43:17	Completed	249.98
2	2	2	2025-01-26 23:43:17	Pending	699.98
3	3	3	2025-01-26 23:43:17	Completed	399.98
4	4	4	2025-01-26 23:43:17	Pending	699.98
5	5	5	2025-01-26 23:43:17	Completed	399.98
6	6	6	2025-01-26 23:43:17	Cancelled	699.98
7	7	7	2025-01-26 23:43:17	Pending	350.00
8	8	8	2025-01-26 23:43:17	Completed	499.98
9	9	9	2025-01-26 23:43:17	Pending	300.00
10	10	10	2025-01-26 23:43:17	Completed	249.98

## Order\_Items Table

```
INSERT INTO Order_Items (order_id, item_id, quantity, price) VALUES
(1, 1, 1, 9.99),
(1, 2, 1, 12.99),
(2, 3, 2, 15.99);
```

order_item_id	order_id	item_id	quantity	price
1	1	1	2	199.98
2	1	2	1	249.99
3	2	3	2	399.98
4	2	4	1	349.99
5	3	5	1	249.99
6	3	6	1	149.99
7	4	7	3	899.97
8	4	8	2	799.98
9	5	9	4	1199.96
10	5	10	3	449.97

10 rows in set (0.00 sec)

## ReviewsTable

```
INSERT INTO Reviews (user_id, restaurant_id, rating, comments) VALUES
(1, 1, 5, 'Amazing pizza! Highly recommend.'),
(2, 2, 4, 'Great sushi, but a bit pricey.');
```

```
mysql> SELECT * FROM Reviews;
```

review_id	user_id	restaurant_id	rating	comments	review_date
1	1	1	5	Amazing food and quick service. Highly recommend the Margherita pizza!	2025-01-26 23:44:32
2	2	2	4	The sushi was fresh, but the prices are a bit high.	2025-01-26 23:44:32
3	3	3	3	Good burgers but nothing special about the fries.	2025-01-26 23:44:32
4	4	4	4	The pasta was delicious, but the portion size was small.	2025-01-26 23:44:32
5	5	5	2	The food was bland and not worth the price.	2025-01-26 23:44:32
6	6	6	5	Fantastic Mughlai food. The kebabs were top-notch!	2025-01-26 23:44:32
7	7	7	4	Great Chinese food, but the service could be improved.	2025-01-26 23:44:32
8	8	8	5	Best desserts I have had in Pune. The chocolate mousse was heavenly!	2025-01-26 23:44:32
9	9	9	3	The barbecue was okay, but the seating was uncomfortable.	2025-01-26 23:44:32
10	10	10	5	Love the cafe! Great coffee and peaceful ambiance.	2025-01-26 23:44:32

10 rows in set (0.00 sec)

## Step 4: Writing Queries

### 1. Get all restaurants and their average rating:

```
SELECT name, location, AVG(rating) AS average_rating
FROM Restaurants
JOIN Reviews ON Restaurants.restaurant_id = Reviews.restaurant_id
GROUP BY Restaurants.restaurant_id;
```

name	location	average_rating
Spice Symphony	Kothrud, Pune	5.0000
Sushi Haven	Viman Nagar, Pune	4.0000
Burger Kingdom	Aundh, Pune	3.0000
Pasta Paradise	Baner, Pune	4.0000
Veggie Delight	Hinjewadi, Pune	2.0000
Tandoori Tales	Hadapsar, Pune	5.0000
The Wok Express	Kharadi, Pune	4.0000
Dessert Bliss	Magarpatta City, Pune	5.0000
Grill Master	Shivaji Nagar, Pune	3.0000
Cafe Mocha	Wakad, Pune	5.0000

## 2. Find all menu items of a restaurant:

```
SELECT item_name, price, description
FROM Menu_Items
WHERE restaurant_id = 1;
```

item_name	price	description
Paneer Tikka	199.99	Grilled marinated paneer with spices
Butter Chicken	249.99	Chicken cooked in a rich, creamy tomato gravy

2 rows in set (0.00 sec)

## 3. Retrieve all orders by a user:

```
SELECT Orders.order_id, Restaurants.name AS restaurant_name,
Orders.total_price, Orders.status
FROM Orders
JOIN Restaurants ON Orders.restaurant_id = Restaurants.restaurant_id
WHERE Orders.user_id = 1;
```

order_id	restaurant_name	total_price	status
1	Spice Symphony	249.98	Completed

1 row in set (0.00 sec)

## 4. Display all reviews for a restaurant:

```
SELECT Users.username, Reviews.rating, Reviews.comments
FROM Reviews
JOIN Users ON Reviews.user_id = Users.user_id
WHERE restaurant_id = 2;
```

username	rating	comments
Gaurav Pawar	4	The sushi was fresh, but the prices are a

1 row in set (0.00 sec)

## 5. Calculate total earnings for each restaurant:

```
SELECT Restaurants.name, SUM(Orders.total_price) AS total_earnings
FROM Orders
JOIN Restaurants ON Orders.restaurant_id = Restaurants.restaurant_id
WHERE Orders.status = 'Completed'
GROUP BY Restaurants.restaurant_id;
```

name	total_earnings
Spice Symphony	249.98
Burger Kingdom	399.98
Veggie Delight	399.98
Dessert Bliss	499.98
Cafe Mocha	249.98

5 rows in set (0.00 sec)