# Introduction

This ER Diagram aims to build a **Food Delivery Platform** connecting restaurants with customers for convenient, on-demand food delivery. Users can browse restaurants, place orders, track delivery, and rate their experience.

Food delivery platforms are highly relevant in today's fast-paced world, especially in urban areas, where convenience and flexibility are increasingly valued. This project addresses the need for accessible and diverse food options, offering convenience for customers and an expanded reach for restaurants. Additionally, as students, we are particularly familiar with and often rely on food delivery services, making this a domain we understand well and are excited to innovate in.

# Entity Description

**1. Individual User**

• UserID (Primary Key)

• Name

• Email

• Password

• Phone

• Address (related to Address table for multiple addresses)

• UserType (e.g., Customer,Delivery Person)

• CreatedAt

• UpdatedAt

**2. Address**

• AddressID (Primary Key)

• UserID (Foreign Key)

• Street

• City

• State

• ZipCode

• Latitude

• Longitude

**3. Restaurant**

• RestaurantID (Primary Key)

• Name

• Description

• ContactNumber

• Email

• LocationID (Foreign Key related to Address)

• Rating

• CreatedAt

• UpdatedAt

**4. Menu**

• MenuID (Primary Key)

• RestaurantID (Foreign Key)

• Name

• Description

**5. MenuItem**

• MenuItemID (Primary Key)

• MenuID (Foreign Key)

• Name

• Description

• Price

• AvailabilityStatus

• CreatedAt

• UpdatedAt

**6. Order**

• OrderID (Primary Key)

• UserID (Foreign Key)

• RestaurantID (Foreign Key)

• OrderStatus (e.g., Placed, In-Transit, Delivered, Canceled)

• OrderDate

• DeliveryDate

• TotalAmount

• PaymentStatus (e.g., Paid, Pending)

• RatingID (Foreign Key related to Rating table)

**7. OrderItem**

• OrderItemID (Primary Key)

• OrderID (Foreign Key)

• MenuItemID (Foreign Key)

• Quantity

• ItemPrice

• TotalPrice

**8. Delivery**

• DeliveryID (Primary Key)

• OrderID (Foreign Key)

• DeliveryPersonID (Foreign Key related to User table where UserType is Delivery Personnel)

• EstimatedDeliveryTime

• ActualDeliveryTime

• DeliveryStatus (e.g., Pending, Out for Delivery, Delivered)

**9. DeliveryPerson**

• DeliveryPersonID (Primary Key, Foreign Key related to User table where UserType is Delivery Personnel)

• DeliveryStatus (e.g., Available, Busy)

• Real-time Location

• Name

• Email

• Password

• Phone

• Created At

• Updated At

**10. Payment**

• PaymentID (Primary Key)

• OrderID (Foreign Key)

• OriginalAmount

• PromotionID (Foreign Key)

• FinalAmount

• PaymentDate

• PaymentMethod (e.g., Credit Card, PayPal)

• PaymentStatus

**11. Rating**

• RatingID (Primary Key)

• UserID (Foreign Key)

• RestaurantID (Foreign Key)

• OrderID (Foreign Key)

• RatingScore (e.g., 1-5)

• Comment

• CreatedAt

**12. Promotion**

• PromotionID (Primary Key)

• RestaurantID (Foreign Key)

• Title

• Description

• DiscountPercentage

• StartDate

• EndDate

**13. CustomerFeedback**

• FeedbackID (Primary Key)

• UserID (Foreign Key)

• FeedbackType (e.g., Delivery, Order Quality, App Performance)

• Comment

• CreatedAt

**14. Favorites**

• FavoriteID (Primary Key)

• UserID (Foreign Key)

• RestaurantID (Foreign Key)

• CreatedAt

**15. Notification**

• NotificationID (Primary Key)

• UserID (Foreign Key)

• Message

• Status (e.g., Read, Unread)

• CreatedAt

**16. Discount**

• DiscountID (Primary Key)

• Code

• Description

• DiscountAmount

• ExpirationDate

• MinOrderAmount

• MaxUsage

**17. OrderDiscount**

• OrderDiscountID (Primary Key)

• OrderID (Foreign Key)

• DiscountID (Foreign Key)

• DiscountAmount

# Entity Relationship

**(Individual) User - Address**

A customer user can have multiple addresses saved for delivery purposes.

**(Individual) User - Order**

A customer user can place multiple orders.

**(Individual) User - Rating**

A customer user can rate multiple restaurants, typically one rating per order.

**(Individual) User - CustomerFeedback**

A user can submit multiple feedback entries to provide general comments of the platform.

**(Individual) User - Notification**

A user can receive multiple notifications.

**User - DeliveryPerson**

Some users are delivery people.

**Restaurant - Address**

Each restaurant has one main address for its location.

**Restaurant - Menu**

Each restaurant has one main menu that contains multiple menu items.

**Menu - MenuItem**

A menu consists of multiple menu items, such as lunch set, all-day breakfast, dinner, etc.

**Order - OrderItem**

Each order can contain multiple items.

**Order - Delivery**

Each order has one associated delivery entry.

**Order - Payment**

Each order has one payment transaction.

**Order - Rating**

Each completed order may have one rating provided by the customer.

**Restaurant - Order**

A restaurant can receive multiple orders from various users.

**Restaurant - Promotion**

A restaurant can have multiple promotions at the same time.

**Restaurant - Rating**

A restaurant can have multiple ratings, each associated with an order.

**Order - OrderDiscount**

An order can have multiple discounts combined

**Discount - OrderDiscount**

A discount code may apply to multiple orders.

**(Individual) User - Favorites**

A user can have multiple favorite restaurants.

**Restaurant - Favorites**

A restaurant can be labeled as “favorite restaurant” by multiple users.

**(Individual) User - Delivery (Delivery Personnel)**

A delivery personnel can be assigned to multiple delivery taks.