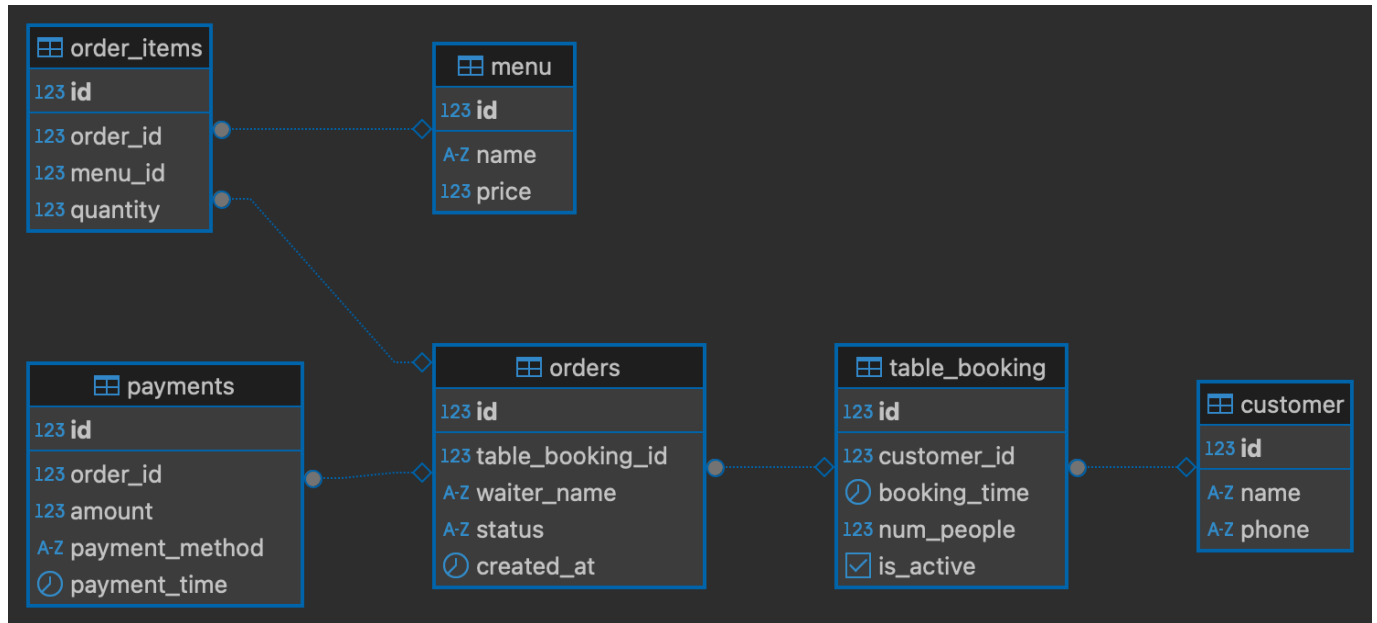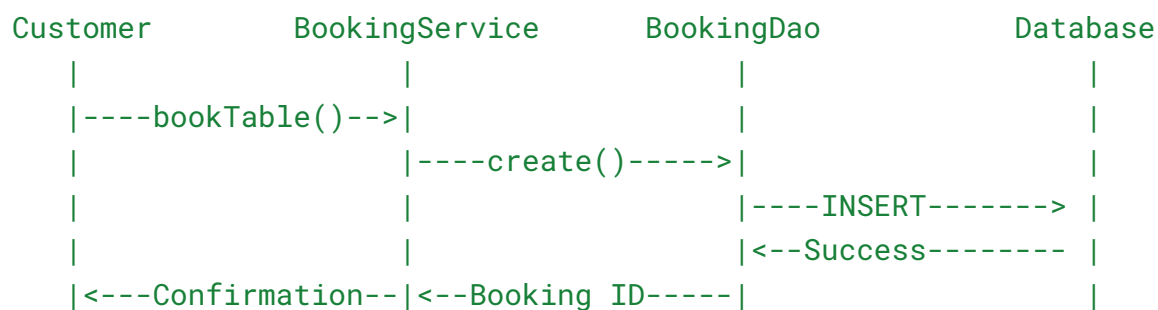# ER Diagram for database structure.

Sequence diagrams

📌 1. Table Booking Flow (Customer)

Participants: Customer → BookingService → BookingDao → Database

```
Customer          BookingService        BookingDao              Database
   |                    |                    |                      |
   |----bookTable()-->|                      |                      |
   |                    |----create()----->|                        |
   |                    |                      |----INSERT------->  |
   |                    |                      |<--Success--------  |
   |<---Confirmation--|<--Booking ID-----|                          |
```

📌 2. Placing an Order Flow

Participants: Customer → OrderService → OrderDAO → Database

```
Customer          OrderService          OrderDao              Database
```

```
    |                  |                       |                        |
    |----takeOrder()-->|                       |                        |
    |                  |----create()----->|                        |
    |                  |                       |----INSERT------->  |
    |                  |                       |<--Success-------   |
    |<--Order Created--|<--Order ID-------|                        |
```

📌 3. Kitchen Processing Orders

Participants: KitchenStaff → KitchenService → OrderDao → Database

```
KitchenStaff      KitchenService         OrderDao                Database
    |                  |                       |                    |
    |--viewOrders()-->|                       |                    |
    |                  |--findPendingOrders()------------->|
    |                  |                       |<--List<Order>-----|
    |<--Pending Orders|<-------------|                    |
    |                  |                       |                    |
    |--markPrepared(orderId)----->       |                    |
    |                  |                       |--updateStatus()-->|
    |                  |                       |      ("Prepared")|
    |                  |                       |<--Success--------|
```

📌 4. Billing and Payment Flow

Participants: Cashier → BillingService → OrderDao, PaymentDao → Database

```
Cashier           BillingService      OrderDao/PaymentDao      Database
    |                  |                       |                    |
    |--generateBill()->|                       |                    |
    |                  |--getOrder()--->|                    |
    |                  |                       |--SELECT---------->|
    |                  |                       |<--Order, Items-----|
    |                  |calculateTotal()|                    |
```

```
|                      |--savePayment()-------------------->|
|                      |                  |--INSERT---------->|
|                      |                  |<--Success-------- |
|<--Payment Success<---------------|                       |
```

📌 4. Admin Flow

Participants: Admin → AdminService → MenuDAO → Database

```
Admin                  AdminService           MenuDao                Database
  |                        |                    |                      |
  |--addMenuItem()------>|                    |                      |
  |                        |--insertMenu()---->|                      |
  |                        |                    |--INSERT------------->|
  |                        |                    |<--Success-----------|
  |<--Menu Added--------|<----------------|                      |
  |                        |                    |                      |
  |--updateMenuItem()--->|                    |                      |
  |                        |--updateMenu()---->|                      |
  |                        |                    |--UPDATE------------->|
  |                        |                    |<--Success-----------|
  |<--Menu Updated-------|<----------------|                      |
  |                        |                    |                      |
  |--deleteMenuItem()--->|                    |                      |
  |                        |--deleteMenu()---->|                      |
  |                        |                    |--DELETE------------->|
  |                        |                    |<--Success-----------|
  |<--Menu Deleted-------|<----------------|                      |
  |                        |                    |                      |
```