Select a Mini World: **Restaurant**

2. SYSTEM DESIGN REQUIREMENTS

Gather Requirements:
List all the information you need to capture for your system (for example, customer details, product info, sales transactions).

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To build an effective restaurant database system, it's important to first identify all the key information the system should store and manage. This includes details about customers, employees, menu items, and order transactions. The goal is to organize the data in a way that supports smooth restaurant operations, like taking orders, tracking items, and managing staff.

Table: Customers
This table stores details about people who place orders.

- CustomerID – unique ID for each customer
- FirstName and LastName – customer's full name
- PhoneNumber – contact number
- Email – customer's email address
- JoinDate – when the customer joined or first ordered

Table: Employees
This stores staff information.

- EmployeeID – unique ID for each employee
- FirstName and LastName – employee's name
- Position – job role (like waiter or chef)
- HireDate – date they were hired
- PhoneNumber – contact number

Table: MenuItems
This contains all the food and drink items available.

- MenuItemID – unique ID for each menu item
- ItemName – name of the item (e.g., Burger)
- Category – type of item (Main, Side, Drink, etc.)
- Price – cost of the item
- IsAvailable – shows if the item is in stock

Table: Orders
This table records each customer's order.

- OrderID – unique ID for each order
- CustomerID – connects to the customer who made the order
- OrderDate – date of the order
- TotalAmount – total price of the order
- PaymentMethod – how the customer paid (cash, card, etc.)

Table: OrderDetails
This gives more detail about what was ordered.

- OrderDetailID – unique ID for each row in this table
- OrderID – connects to the main order
- MenuItemID – connects to which menu item was ordered
- Quantity – how many of the item were ordered
- ItemPrice – price of the item at the time of the order

By gathering this information through separate but connected tables, the restaurant system can run efficiently. It ensures that customer orders are linked to the right menu items, payments are tracked, and employee roles are organized. This clear structure makes it easier to manage day-to-day operations and analyze restaurant performance.

Document Process:
Write a short explanation (half a page to one page) about how you determined what to include in your project.

For my Mini World project, I selected a restaurant because I work part-time at a Vietnamese restaurant. This gave me a real connection to the data and helped me design a system that reflects actual restaurant operations. I identified the key areas to include: customers, employees, menu items, orders, and order details.
To better understand what data to collect, I interviewed two staff members at the restaurant:

Interview with the Head Server (Pema):

- **Q: What details do you record when a customer places an order?**
- *A: We record the order number, the food items ordered, how many of each item, and the price.*
- **Q: What customer information is important to keep?**
- *A: We usually keep their names, phone numbers, emails, and the date they first visited.*

From this, I created the **OrderDetails** table with fields like OrderID, MenuItemID, Quantity, and ItemPrice. For the **Customers** table, I included FirstName, LastName, PhoneNumber, Email, and JoinDate.

Interview with the Manager (Palzom):

- **Q: What kind of employee information do you manage?**
- *A: We store each employee's name, their position (like chef or waiter), when they were hired, and their contact number.*

This helped me build the **Employees** table with fields like FirstName, LastName, Position, HireDate, and PhoneNumber.

The **MenuItems** and **Orders** tables were built using actual data from the restaurant's point-of-sale (POS) system. The POS system provided information like the item names, categories (such as appetizer, drink, or main), prices, and whether an item is available. It also included details about customer orders, such as the date of the order, the total amount paid, and the method of payment (cash or card).

Overall, the process of building this Mini World project was a mix of real-life experience, direct interviews, and system-based data. By speaking with staff members like the head server and manager, I was able to learn exactly what information is important in a working restaurant environment. Their input helped shape the structure of my database and made sure it reflected realistic operations. Using the restaurant's POS system also gave me real transaction data to model, which added more accuracy and depth to the project. This approach not only helped me understand how to design a database but also taught me how to gather and apply requirements from real users, which is an important part of working on any information system.