

Project Analysis: Restaurant Management System

1. System Scenario

A Restaurant Management System streamlines daily operations by handling customer seating, order management, menu maintenance, and payment processing. It is used by servers, kitchen staff, and managers to ensure efficient service and accurate record-keeping.

2. Main Entities in the System

Entity	Description
Customer	Represents a dining customer, including table assignment and dining preferences.
Table	Represents restaurant seating tables with capacity, current status, and assigned server.
Order	Captures order details placed by customers at tables, relating to menu items, including price and status.
Menu Item	Defines individual dishes or drinks available for order.
Server	Includes employees who serve customers, with roles and shifts.

3. Attributes and Operations for Each Entity

Customer

Attributes
Customer ID
Name
Table ID
Operations
viewOrderHistory()
addOrderToHistory(orderID)

Table

Attributes
Table ID
Seating Capacity
Location (Area)
Status (Free/Occupied)
Reserved Flag
Assigned Server ID

Operations
reserveTable()
freeTable()
getCurrentStatus()
unassignServer()

Order

Attributes
Order ID
Table ID
Menu Item ID
Price
Order Time
Status

Operations
addItem(menuItemID, quantity)
removeItem(menuItemID)
calculateTotal()
updateStatus()
printBill()

Menu Item

Attributes
Item ID
Name
Description
Price
Category
Availability

Operations
updatePrice(newPrice)
toggleAvailability()
updateDescription(text)
getDetails()

Server

Attributes	
Server ID	
Full Name	
Contact Info	
Employment Date	
Shift	
Operations	
assignTable(tableID)	
unassignTable(tableID)	
getContactInfo()	
updateContactInfo()	