ONLINE FOOD ORDERING AND RESERVATION MANAGEMENT SYSTEM

DESIGN PHASE SUBMISSION



# **GROUP MEMBERS**

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# **PROPOSAL:**

## **Introduction and Description:**

The project entails a restaurant’s online website where a customer is allowed to order, make reservations etc. the restaurant is having multiple locations whom data will be recorded through connecting the web-app with database. It is useful to both end customer and the management of the restaurant as well.

## **Project Functions:**

• Allows user to view menu   
• Allows user to order food online (guest user or logged in)   
• Allows user to view delivery time (this will done via calculating the distance of user’s area to restaurant + time to prepare food)   
• Allows user to see locations of restaurants   
• Allows user to have a account to pool points to redeem discount on orders   
• Allows user to make reservation   
• Allows user to request to cancel reservation   
• Allows user to update reservation details (within a certain time limit)   
• Tells user real-time of availability of seats for reservation   
• Allows management to view order details   
• Allows management to add, update or delete menu items   
• Allows management to approve reservation requests   
• Auto email generation to customer when reservation is approved   
• Allows management to keep track of via view, insert, update or delete in database   
• Allows management to see monthly total sales (annually, monthly etc)

## **Frontend and Backend Technologies:**

**Frontend:** HTML, CSS, JSP

**Backend:** JAVA, MySQL

# **NORMALIZATION:**

The table is already in 1NF

Food\_Items is already in 3NF.

All attributes of Restaurant\_Tables were in Reservations table but because of partial dependency on composite key of (ReservationID, TableNo) are now in there 2NF forms.

All the attributes of Orders, Customers, Delivery were in Payments table but because of partial dependency on Composite Key of (CustomerID, OrderID, PaymentID, DeliveyID) are now in there 2NF forms.

**Functional Dependencies:**

1. CustomerID -> Fname, Lname, PhoneNo, Email, Address, Points, Registered
2. OrderID, CustomerID -> Date, Status
3. ItemID -> itemName, itemPrice, itemDescription
4. CustomerID, OrderID, PaymentID, DeliveyID -> paymentMethod, date, amount
5. DeliveryID -> date, riderName
6. ReservationID -> CustomerID, tableNo, time, Date
7. tabelNo -> floorNo, availability, capacity

## **2NF form:**

**CUSTOMERS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CustomerID | Fname | Lname | PhoneNo | Email | Address | Points | Registered |

**ORDERS**

|  |  |  |  |
| --- | --- | --- | --- |
| OrderID | customerID | Date | status |

**FOOD\_ITEMS**

|  |  |  |  |
| --- | --- | --- | --- |
| ItemID | itemName | itemPrice | itemDescription |

**PAYMENTS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| paymentID | customerID | orderID | DeliveryID | paymentMethod | Date | Amount | riderName |

**RESERVATIONS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ReservationID | customerID | tableNo | time | Date |

**RESTAURANT\_TABLES**

|  |  |  |  |
| --- | --- | --- | --- |
| tableNo | floorNo | Availablilty | Capacity |

## 3NF Form:

Because of FD 5 we have a transitive dependency so the table payments will look like:

**PAYMENTS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| paymentID | customerID | orderID | DeliveryID | paymentMethod | Date | Amount |

**Delivery**

|  |  |  |  |
| --- | --- | --- | --- |
| DeliveryID | OrderID | riderName | Date |

# **ER DIAGRAM:**

