**CRC:**

Class: Customer

Responsibilities: Add personal info: Name, Phone no.

Enter Table Size

Accept/Reject confirmation

Collaborator: Restaurant\_System

Class: Restaurant\_System

Responsibilities: Sends Message notification to customer

Adds customer to waitlist queue

Check for available table and capacity

Updates the waitlist queue

Assigns table to customer

Collaborator: Customer, Table

Class: Table

Responsibilities: Table size

Gives Status-Occupied/ Unoccupied

Collaborator: Restaurant\_System

|  |  |
| --- | --- |
| Class: Customer | |
| Responsibilities:  Add personal info: Name, Phone no.  Enter Table Size  Accept/Reject confirmation | Collaborator:  Restaurant\_System |

|  |  |
| --- | --- |
| Class: Restaurant\_System | |
| Responsibilities:  Sends Message notification to customer  Adds customer to waitlist queue  Check for available table and capacity  Assigns table to customer  Updates the waitlist queue | Collaborator:  Customer, Table |

|  |  |
| --- | --- |
| Class: Table | |
| Responsibilities:  Table size  Gives Status-Occupied/ Unoccupied | Collaborator:  Restaurant\_System |

**Design Pattern:**

1. Objects: Customer and Restaurant\_System

**Pattern: Observer**

Here the pattern is Observer because the Customer subscribes to the Din Tai Fung restaurant reservation system and get updates/notifications for the status of table.

1. Objects: Table and Restaurant\_System

**Pattern: State**

Here the pattern is State because the state of the table changes from occupied to unoccupied and vice versa which reflects to the Restaurant system.