

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.

- 2) 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.