Requirements:

Statement Requirements:

Running a restaurant is tediously hard. It is also time consuming, doing this task effectively requires great management skills. These management skills mainly focus on doing tasks effectively in the least amount of time thus freeing up time to work on overall efficiency of the restaurant at the same time making sure everything is running smoothly. If we manage to effectively reduce the time to serve each table just by a few seconds we can significantly increase profits. To achieve this using a software solution the most difficult part is moving to a whole new touch-screen system to eliminate all "pencil and paper" work. Hence adaptation of these kinds of systems are slow. Restaurant automation can improve on a couple of essential daily operations, which are otherwise slow when done with the conventional pencil and paper, these include:

1. Keeping track of reserved, empty and cleaned tables.

2. Waiters making mistakes in taking orders.

3. Reservation discrepancies.

4. Need for waiters to constantly check with the kitchen to see if the food is ready or not.

5. Analyzing data to determine popular hours.

6. Customers' need to rely on waiters to correctly remember their orders.

7. Some customers call on waiters to check their orders.

Functional Requirements: These are the basic requirements that the software should be able to execute without a problem. These requirements are necessary for developing systems. A subset to functional requirements is non-functional requirements which we will discuss after functional requirements. For this restaurant automation software, the functional requirement that are to be accomplished are:

1. Application should have interfaces for Customer, Hall Manager, Admin
2. Home Screen should contain 'Login' and 'Show Customer Interface' functionalities
3. User should be able to login as admin and hall manager.
4. User should be able to the see customer interface with list of Menu items.
5. Customer should be able to select items from the menu list to order the food.
6. Customer should be able to place the order on clicking 'Confirm Order' button
7. Hall Manager should start server and then can view tables
8. Hall Manager should be able to see the status of Free, Booked or Occupied Tables
9. Hall Manager should be able to edit the status of the tables.
10. Hall Manager can view completed orders
11. Allow Admin to add inventory items
12. Admin can add employee

13. Allow Admin to add Menu items
14. Admin can add table
15. Admin can set end of week
16. Admin should be able to add tablets
17. Admin can view notifications
18. The system should let authorized users login with their unique identification
19. System should store the menu items
20. Modifying menu items should work

Non-Functional requirements:

1. Application should be able to run on Pixel 4XL API 30
2. The system should have an authorization aspect for different users except customer
3. Communication between devices should be seamless.
4. The interface of all screens should be easy to understand by any employee
5. Unknown devices should not be able to connect to the system
6. The system should be scalable to cater the expansion of the restaurant