



Digital Restaurant Management System

Assignment 1

Prepared by

Nicola Dale 25933337

Jade van der Linden 25883224

Kerry-Ann Uys 25847333

Jessica Mostert 25999958

Concept

Creating an automated system to improve the current paper-based outdated system.

1. Problem Statement And Primary Goals Of The New System:

This family owned business operates using simple, manual, paper based methods which has been efficient for a small 30 seat restaurant. However as the business expands, it has been proven to be unsustainable and inefficient for a 100 seat restaurant. The use of chalkboards for updating tables and paper filing takes time away from customers and is prone to errors.

The new automated system will foster real time updates, accurate and fast data management, staff coordination and improved communication across departments in order to reduce errors and increase customer turnover and satisfaction.

2. Key Users, Their Goals and Pain Points With The Current System:

Owners and Management:

- ➔ Their goals are to oversee and file restaurant sales, processes and operations. The reliance on a paper-based filing system makes this task time consuming, and overseeing operations is challenging due to the lack of real-time visibility into ongoing tasks.

Kitchen Staff:

- ➔ Their goals are to receive, prepare and store orders on paper. Their pain point is miscommunications due to illegible handwriting and an inability to manage the order status.

Hostess:

- ➔ Their goals are to manage and update table allocations and walk-ins on a chalkboard diagram. Their pain points are overbooking and misallocation of tables based on availability and table size. When a hostess has to update chalkboards, they have to leave the front-of-house, resulting in no one being available to greet guests.

Waiter:

- ➔ Their goals are to give food orders to the kitchen staff, serve orders when they are ready, and manually enter the bill. Their pain points are continuously checking order statuses, and handwriting special requests which could lead to mistakes, lower turnover and customer satisfaction due to time wastage.

Bus staff:

- ➔ Their goals are to continuously check when tables are needed to be cleaned or set for new customers. Their pain points are that they cannot easily see which tables need clearing, which presents the challenge of being in the way of other staff.

3. The Essence Of The System:

The core of the system is to modernize and enhance the current restaurant operations, ensuring efficiency, accuracy, and real-time coordination across all departments. The system will use an authorisation card system to manage permissions of the various staff. Employees will use tablets to manage their

responsibilities. Owners/Managers are able to approve staff shifts, oversee table status, manage inventory, adjust bookings, track tip allocations, and log operational details such as broken crockery and staff hours. The difference is that owners will be able to oversee all three restaurant branches, while managers will only oversee their branch. Hosts will manage reservations, update real-time floor statuses, handle walk-ins, and reallocate tables while updating bookings. Kitchen staff will receive and manage orders, notify wait staff when meals are ready, track inventory, edit menu items, and view the ingredients for each meal in the case of allergies. Bus staff will have access to live floor updates, track broken crockery, update table statuses, manage cleaning supplies, and ensure tables are set for new customers. Waitstaff will use the system to take and manage orders, handle bill payments, and update table statuses. All staff will be able to coordinate shifts through the system. Customers can conveniently make, edit, or cancel bookings, as well as view the menu. By integrating these functions into a centralized automated platform, the system helps to improve communication, keep errors minimal, and improves the overall dining experience of customers.

4. *User Stories Using New System:*

Owners and Management:

- As a manager or owner I want to view reports on customer trends and peak hours to ensure adequate staff and inventory.

Kitchen Staff:

- As the kitchen staff, I want to keep track of food inventory to ensure that the necessary products are available for meal preparation.

Hostess:

- As a hostess I want to have access to real time updates to ensure customers have been seated quickly and efficiently.

Waiter:

- As wait staff, I want to view the ingredients for each meal so that the customer can ensure safety against their allergies when ordering.

Bus staff:

- As bus staff, I want to log broken crockery into the inventory system, to alert the owners/managers.

Customers:

- As a customer, I want to edit my upcoming booking on the system.

5. Brainstorming

Our brainstorming sessions included discussions of the problems with the old system, identified through a role play of the restaurant operations. This led us to identifying problems such as operation inefficiency, the instances in which miscommunication and errors may occur. We brainstormed ideas for the new system which would address these problems and outlined solutions that would overcome these challenges. Additionally we brainstormed the addition of new features which were not feasible for the old system, aiming to improve the overall operations of the restaurant.