Canteen Ordering System for Unilever.

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Introduction

Unilever, a renowned British-Dutch multinational consumer goods company, has firmly established itself as one of the oldest and most influential players in the fast-moving consumer goods (FMCG) industry. With its headquarters located in London, England, Unilever's vast range of products enjoys a global presence, reaching approximately 190 countries worldwide.

Within its UK offices, Unilever accommodates a substantial workforce of around 1,500 employees, occupying 12 floors of the office building. To cater to their dining needs, the company provides two canteens, each capable of seating approximately 150 employees at any given time. However, an inherent challenge arises during the lunch hour, as most employees prefer to take their lunch between 12 noon to 1 pm. Consequently, a significant rush occurs in the canteen during these hours, resulting in employees wasting valuable time waiting for tables to become available.

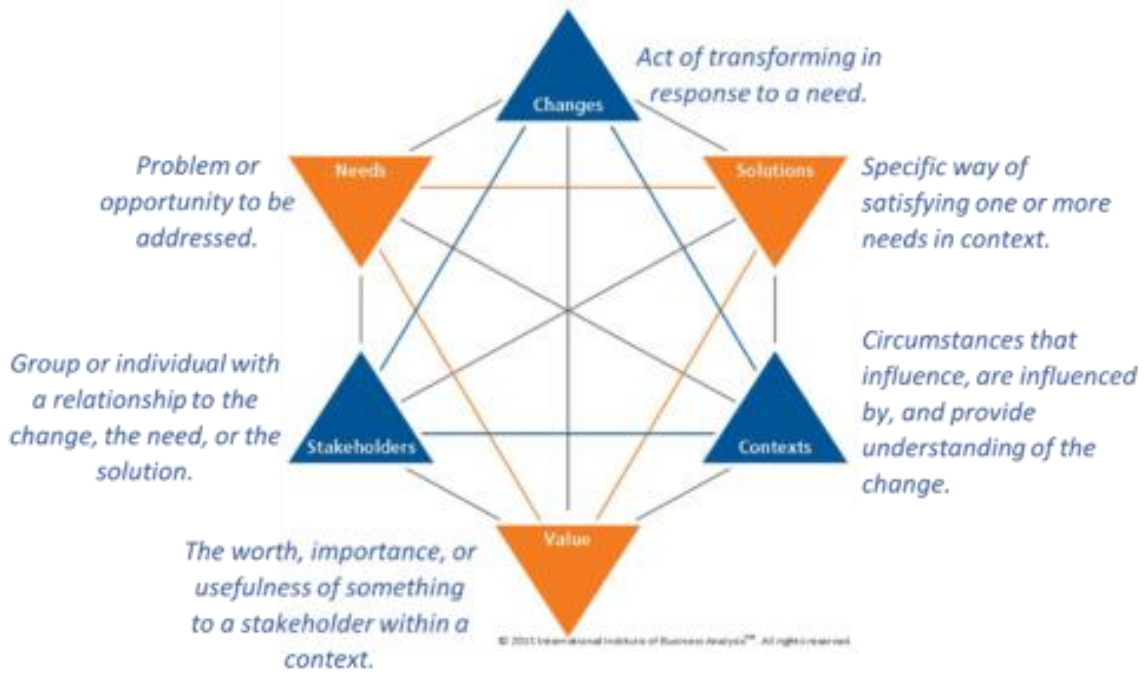
Recognizing the impact of this issue on productivity and employee satisfaction, Unilever's management decided to investigate the problem further. Through careful analysis, they determined that the lunchtime routine consumed approximately 60 minutes, including the time taken to walk to and from the canteen. Astonishingly, nearly 30-35 minutes were lost in queuing for food and securing a table, leaving only a mere 10-15 minutes for employees to enjoy their meal. The remaining 10 minutes accounted for elevator travel to and from the canteen.

Furthermore, another concern raised by employees was the limited availability of their preferred food options due to items frequently running out. Consequently, the canteen often wasted a significant quantity of unconsumed food, leading to unnecessary disposal.

In response to these challenges, many employees have voiced their desire for a more efficient lunchtime experience. They have requested a system that allows canteen users to conveniently order meals online, with the option of having them delivered to their work locations at specified times and dates. Such a system would not only alleviate the time wasted in queuing and traveling to the canteen but also ensure employees have access to their desired food choices, minimizing food waste.

This report aims to explore and propose a solution that addresses these concerns by leveraging modern technology to streamline the lunchtime experience at Unilever. By implementing an online ordering and delivery system, Unilever can enhance efficiency, reduce waiting times, improve employee satisfaction, and contribute to a more sustainable approach by minimizing food waste.

Business analysis core concept model



Requirement classification schema

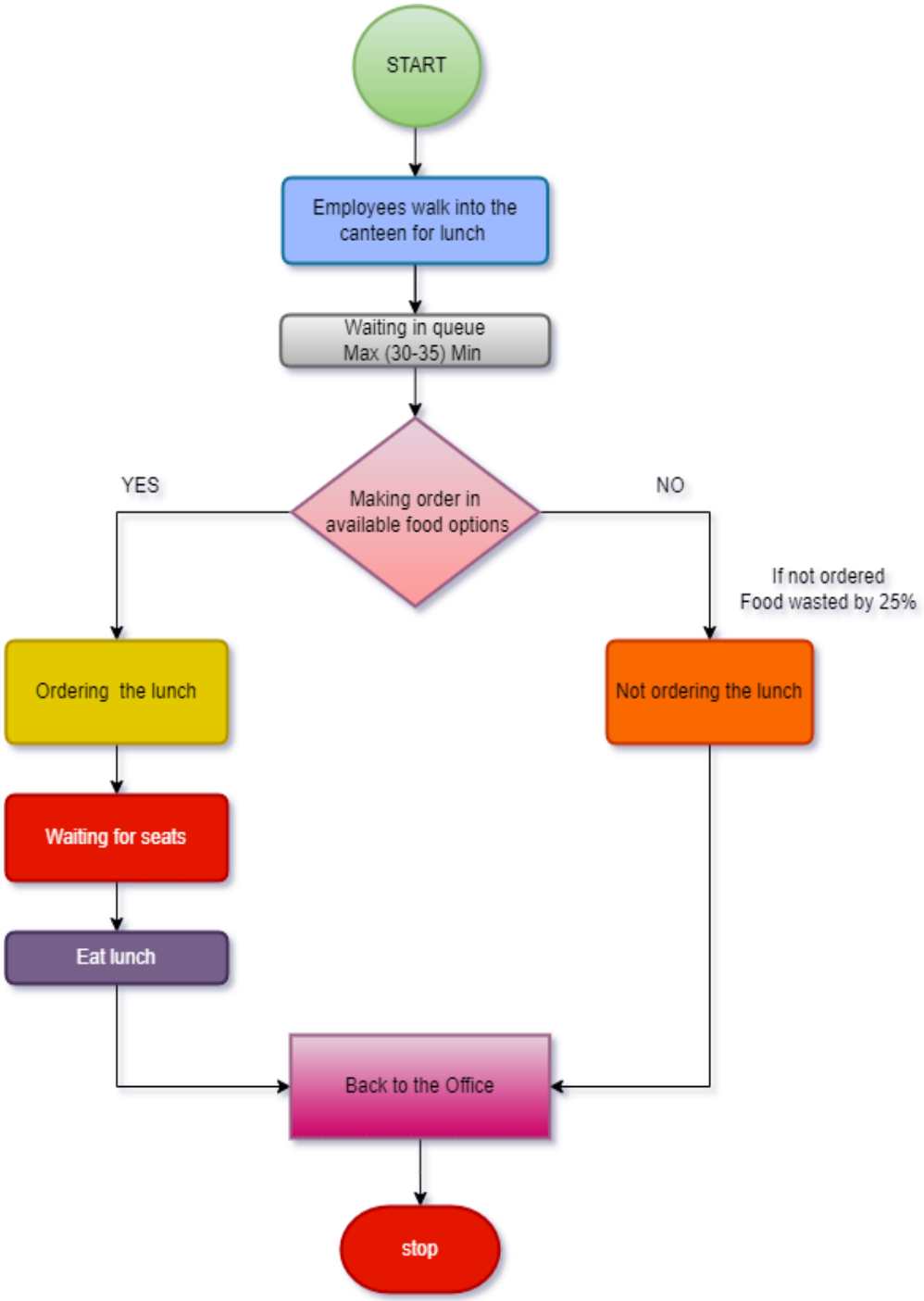
To automate the canteen ordering system by developing an online food ordering portal for the company that can increase efficiency and save time and manpower.

- Reduce canteen food wastage by a minimum of 30% within 6 months following first release.
- Reduce canteen operating costs by 15% within 12 months, following initial release.
- Increase average effective work time by 30 minutes per employee per day, within 3 months.
- By making the ordering process automated and by delivering the food to the user's workstation, the canteen will be able to operate with lesser manpower.

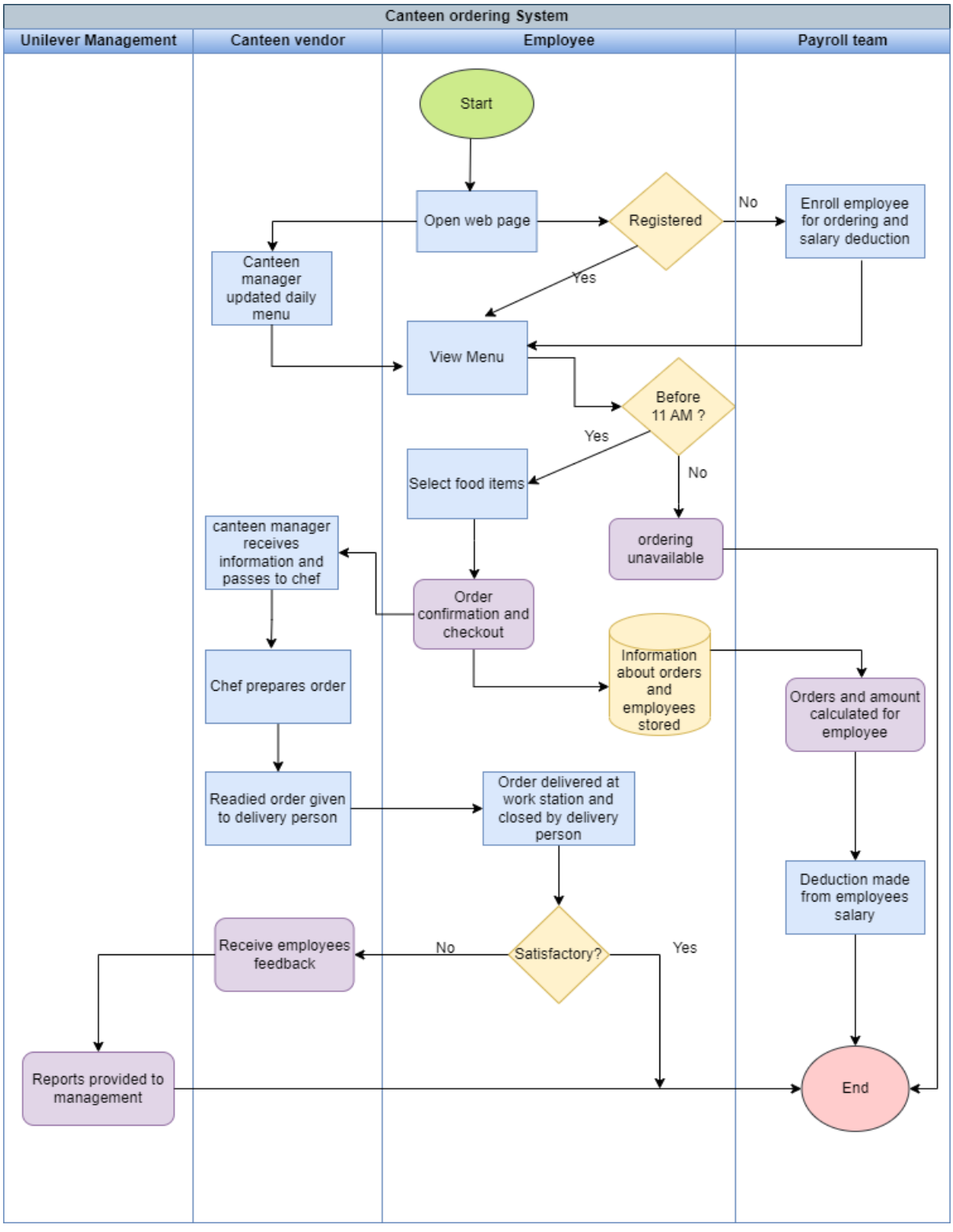
Identifying stake holders

Employee/ Customer	• The employee can order their lunch online without any hassle waiting in the canteen for buying lunch • It also avoids the inconvenience of carrying cash around or any form of payment that consumes time to pay for the food, as the payment will be deducted from the employee's salary. • Having pre-ordered their meal a few hours earlier, they don't have to worry that they will run out of it before they can purchase their lunch.
Project manager	• He is accountable for the completion of the canteen online ordering project • He makes sure other key stakeholders are working towards the completion of the project
Implementation SME	• He works on the building of the online ordering application through coding.
Tester	• He tests the functionality of the application created before releasing to the users
Operational team	• Will handle the operational and support tasks
Canteen Manager	• This allows the canteen manager to take orders without having to deal with a crowd giving orders at the same time in the canteen, and it allows the manager to work more efficiently with the online orders. • The canteen manager could send a request message for the delivery of their order to the respective employees. • He could easily update the menu online himself
Delivery Boy	• The delivery boy gets the ordered food directly to the respective employee's desk. • He updates the system with the delivered orders and closes the order

Create As-is and future process map



Future process map



In scope & out scope requirements

In scope

Online Meal Ordering System: The system should allow employees to order meals online.

Delivery to Work Location: The ordered meals should be delivered to the employees' work location at a specified time and date.

Meal Availability: The system should provide information about the availability of different food items.

Order Customization: Employees should be able to customize their meal orders based on their preferences or dietary restrictions.

Efficient Order Processing: The system should efficiently process and handle a large number of meal orders during peak lunch hours.

Payment Processing: The system should support secure and convenient online payment methods for meal orders.

Food Waste Reduction: The system should aim to reduce food waste by accurately estimating the demand and preparing meals accordingly.

Out scope

Physical Canteen Operations: The system is not responsible for managing the physical canteen operations, such as food preparation, inventory management, or staffing.

Employee Transportation: The system does not handle transportation logistics for employees going to and from the canteen.

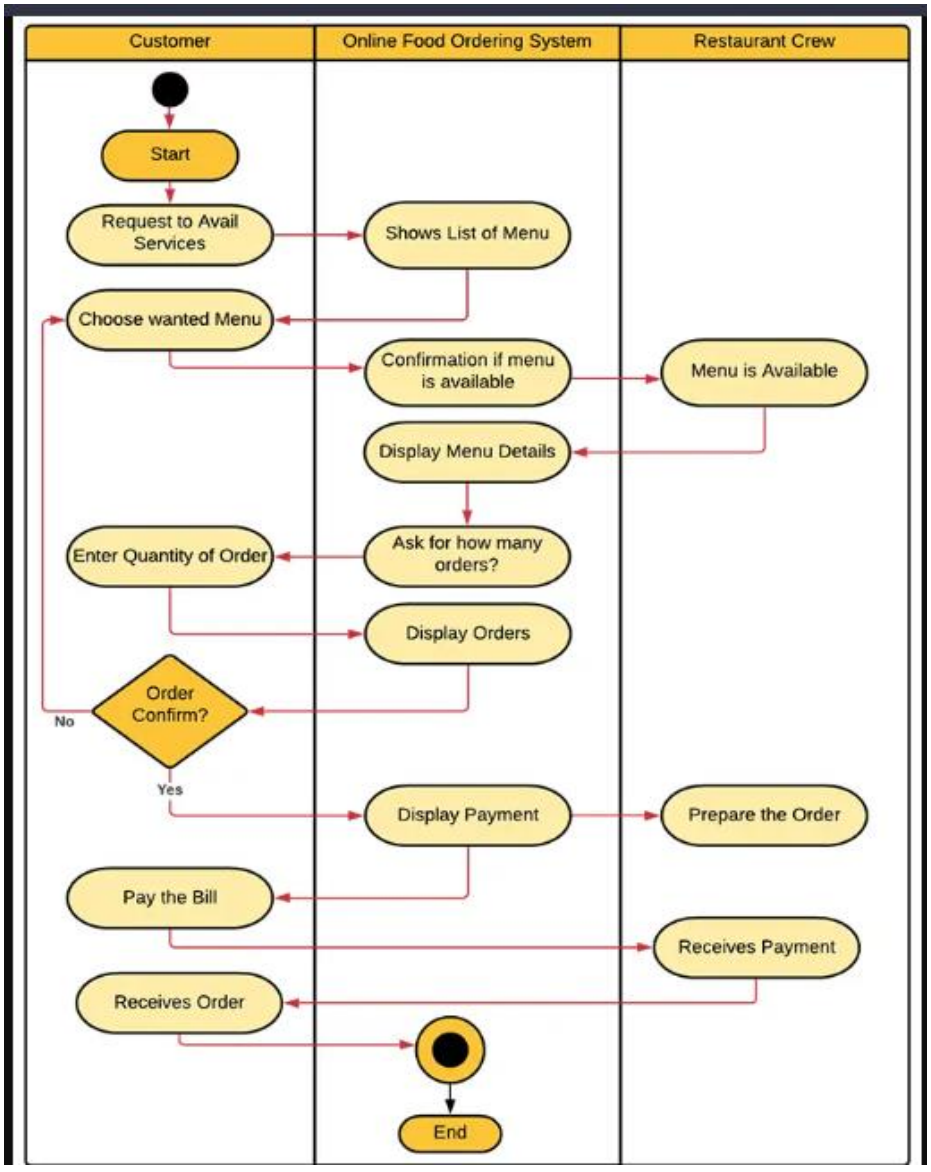
Physical Seating Availability: The system does not manage physical seating availability in the canteen

Food Quality Assurance: The system is not responsible for ensuring the quality of food prepared in the canteen.

Menu Planning: The system does not involve menu planning or determining the variety of food items offered in the canteen.

Company Structure and Employee Count: The system does not address broader company structure or the exact number of employees in different locations.

Activity daigram



Funtional & non functional requiremnets

Functional Requirements:

Online Meal Ordering: The system should allow employees to place meal orders online.

Menu Selection: Employees should be able to select from a menu of available food items.

Customization Options: The system should provide options for customizing meal preferences, such as dietary restrictions or special requests.

Delivery Scheduling: Employees should be able to specify the desired delivery time and date for their meals.

Payment Processing: The system should support secure online payment options for meal orders.

Order Confirmation: Employees should receive a confirmation of their meal orders with order details.

Order Tracking: The system should provide a tracking mechanism for employees to monitor the status of their meal deliveries.

Order Modifications/Cancellations: Employees should have the ability to modify or cancel their meal orders within a specified timeframe.

Inventory Management: The system should maintain an inventory of available food items and update it in real-time to avoid offering out-of-stock options.

Non-Functional Requirements:

Performance: The system should be capable of handling a high volume of concurrent users and process orders efficiently.

Reliability: The system should be reliable, ensuring that orders are accurately processed and delivered on time.

Usability: The user interface should be intuitive and user-friendly, making it easy for employees to navigate and place meal orders.

Security: The system should ensure the security of employee information and online payment transactions.

Scalability: The system should be scalable to accommodate future growth and increased demand.

Integration: The system should integrate with existing systems or databases to access employee information and track deliveries.

Availability: The system should be available and accessible to employees during specified operating hours.

Mobile-Friendly: The system should be responsive and accessible on mobile devices, allowing employees to order meals from anywhere.

Cost-Effectiveness: The implementation and maintenance costs of the system should be reasonable and within budget.

Regulatory Compliance: The system should comply with applicable data protection and privacy regulations.

ER diagram

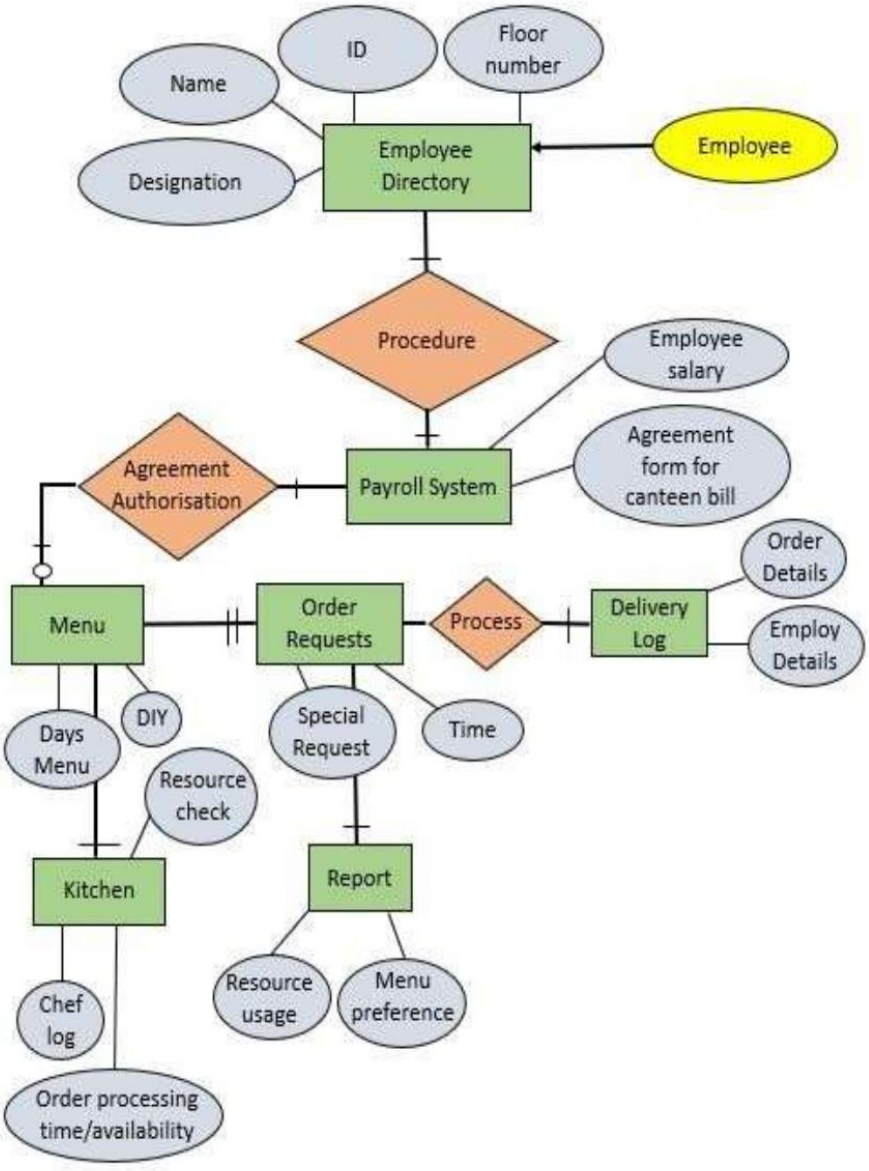


Diagram shows the flow structure and the entities that each unit stores and the triggers to activate and process that initiates the actions.

Features to be improved

Online Ordering System: Develop a user-friendly online platform or mobile application where employees can browse the menu, select their preferred meal options, and place orders in advance. This system should allow employees to choose specific delivery times and dates for their meals.

Meal Customization: Provide options for employees to customize their meals based on dietary preferences, allergies, or specific requirements. This feature ensures that employees can select meals tailored to their individual needs.

Real-Time Inventory Management: Implement an inventory management system that tracks the availability of food items in real-time. This system can prevent the canteen from running out of popular items and notify employees in advance if a particular dish is unavailable.

Prepaid Meal Accounts: Introduce a prepaid system where employees can deposit funds into their canteen accounts. This enables a seamless payment process and reduces the time spent on payment transactions during busy lunch hours.

Table Reservation: Allow employees to reserve tables in advance through the online platform. This ensures that employees have a designated space to eat their meals without waiting for a table to become available.

Food Waste Reduction: Implement measures to reduce food waste by closely monitoring the demand for different food items and adjusting the quantity prepared accordingly. Additionally, consider implementing donation programs to distribute excess food to local charities or food banks.

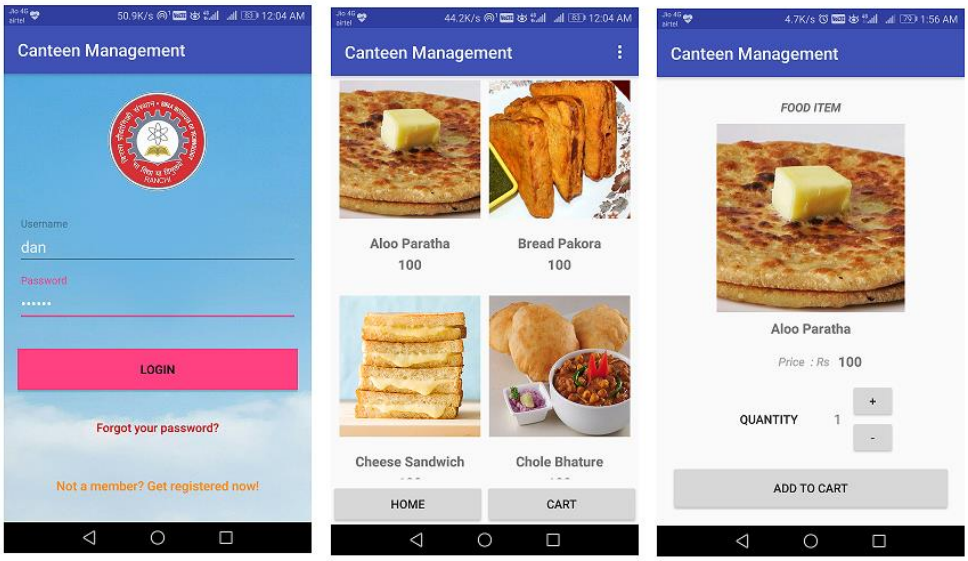
Feedback and Rating System: Enable employees to provide feedback and rate their dining experience through the online platform. This feedback can help the canteen management team identify areas for improvement and address any issues promptly.

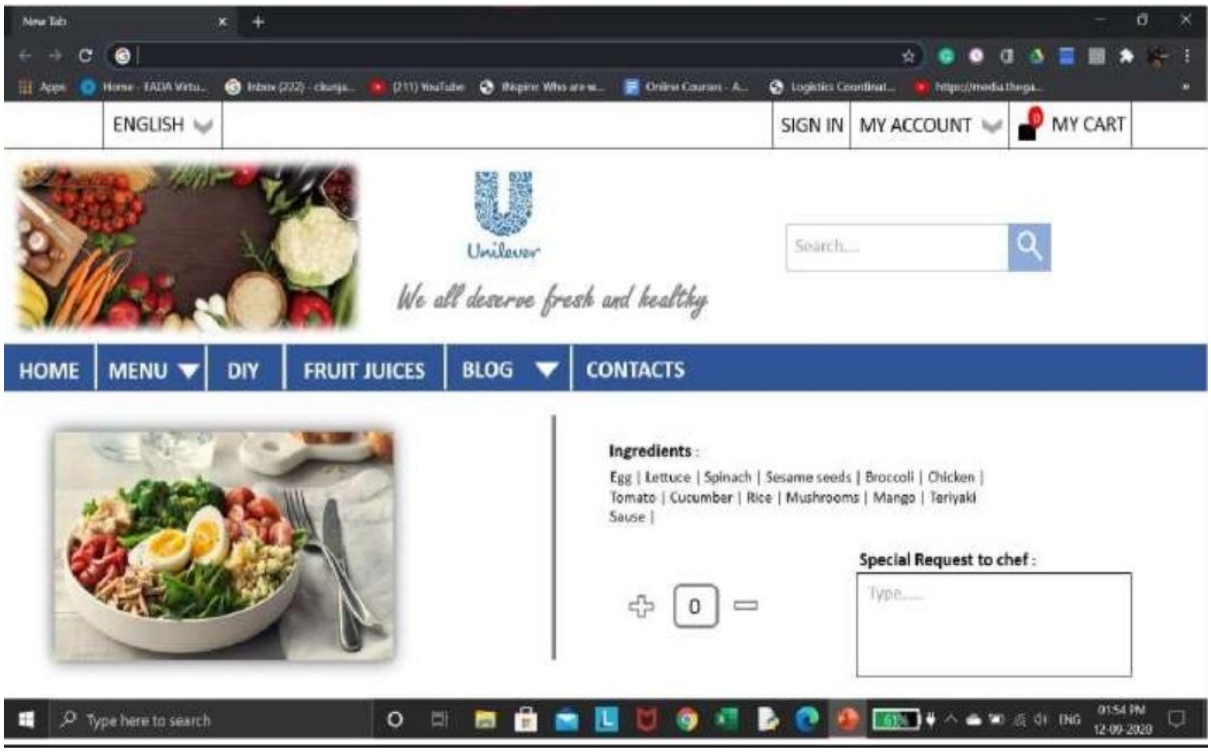
Menu Rotation and Variety: Ensure a diverse and regularly updated menu to cater to different preferences and dietary needs. Rotate menu items to provide employees with a variety of choices, reducing the chances of running out of popular dishes.

Dietary Information and Allergen Labels: Clearly display nutritional information and allergen labels for each menu item, helping employees make informed choices about their meals.

Integration with Calendar Tools: Integrate the online platform with employees' calendar tools, such as Microsoft Outlook or Google Calendar, to allow for easy scheduling and reminders for meal orders.

Wire frames





Prototype of employee's page view while choosing and ordering a specific dish.

Conclusion

In conclusion, the current situation at Unilever's UK offices regarding lunchtime arrangements and canteen services has several issues that need to be addressed. The high number of employees and limited seating capacity in the canteens result in long waiting times and wasted time for employees during lunch breaks. The inefficiencies in the current system, such as waiting in queues to collect food, limited eating time, and time spent traveling to and from the canteen, contribute to reduced productivity and employee dissatisfaction.

Furthermore, the availability of food items in the canteen is inconsistent, leading to employees not always getting their preferred meal choices. This issue is further compounded by the significant food wastage resulting from unsold items being discarded.

To address these challenges, many employees have expressed the need for an online ordering system that allows them to order meals to be delivered to their work location at specified times and dates. Implementing such a system could greatly improve the lunchtime experience for employees by reducing waiting times and ensuring they receive their desired meals. Additionally, it would minimize food waste and increase overall efficiency in the canteen operations.

By embracing technology and adopting an online ordering and delivery system, Unilever could enhance employee satisfaction, save time, and reduce unnecessary food waste. This approach would align with the evolving needs and expectations of modern workplaces, where convenience, personalization, and efficient service are highly valued.