Project:
CANTEEN ORDERING SYSTEM

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for **Simplilearn-CBAP**

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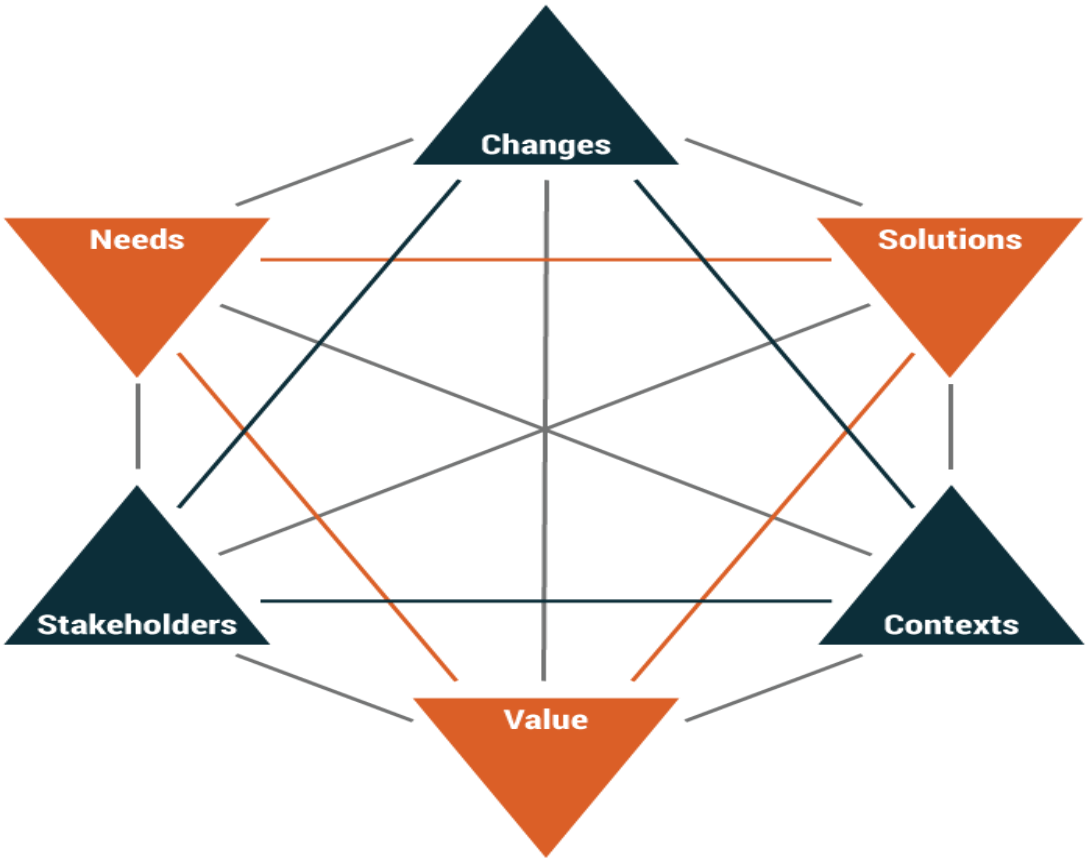
Introduction :

Unilever is a British –Dutch MNC Company, headquartered in London, England. It is one of the oldest FMCG companies, and its products are available in 190 countries around the world. In its UK offices, Unilever had around 1500 employees in a 12-floor building.

Project Overview :

The Unilever Company has 2 canteens to cater to 1500 Employees with possible seating of 150 employees each at a time in the lunch hour 12 pm-1 pm which leads to huge rush and waiting in queue. Almost it took an hour for employees to go and come back from lunch and there is a lack of options for his/her choice to select from the menu list. This is affecting the employee's quality of work life and productivity so dissatisfaction leads to wastage of food by 25% and results in increasing the operation costs.
Waiting in queue: 30-35 minutes
Time spent in the canteen: 10-15 minutes
Return to a workstation: 10 minutes

Business Analysis core concept Model as per Babok :


Changes
Needs
Solutions
Stakeholders
Contexts
Value

Stakeholders

User Stories

ACTOR	NEEDS/WANTS
Canteen Manager	• I can take out a combined list of all the orders, which are sorted out with subtotals of the same dishes

	people have ordered. For eg Fish and chips – 10, Rice with kidney beans -10 etc ● The system should also give a floor-wise list of orders to plan deliveries ● Data and reports on most ordered items, and least ordered items with quantities for planning the inventory
Payroll System	● A list of employees with the total Price of food items ordered for the specified period. ● Employee-wise list of items ordered and price (datewise) which gets appended with salary statement for employees to check deduction ● A list of employees with dates enrolling and leaving the canteen ordering system
Delivery Boy	● He should have a list with floor-wise open orders. After food is delivered, he will checkbox the items on his list. After delivering all the orders he will close the orders on the website ● A tablet can also be used for closing orders as and when they get delivered
Employee/Customer	● I would like to eat food from a variety of cuisines. The food should be nutritious and freshly cooked. I like when the food is hot and is served at the right time. I don't like to be kept waiting. ● I am so swamped with work it is difficult for me to go to the canteen and eat. I want options which I can eat at my workstation while working ● I hate to wait for food to be served and don't want to eat at my workstation. I like to take my meals in the canteen
Management	● Most ordered and least ordered items with various drill downs such as floor wise, department wise which can be used for forecasting ● List of employees enrolled/ left and no of orders placed ● Overview and drill down of the feedback submitted ● Monthly Financial reports ● Order forecasting i.e. a prediction of which items will be ordered and when they will be ordered.

Problem Definition and Solution

Canteen: Monthly Food wastage. Overcrowded Canteen. Inability to offer a wide variety of menu choices. Shortage of dishes on any given day

Customer: Wastage of time. Unavailability of dishes, choices of food is limited, shortage of dishes if you are late for lunch, Time flexibility

Solution: A canteen ordering system with an option to eat meals at a workstation at the specified time

The ordering system will have the following features

- Order meals from the canteen menu to be delivered or in the canteen at the specified time
- Create, view, modify, and delete meal menus
- Register/deregister for payroll deduction – this is the prerequisite for using the system. Only employees registered for payroll deduction can order meals
- Produce summarized order list for the day for canteen staff
- Produce floor-wise delivery details for planning deliveries by delivery boy
- Booking for table space in the canteen for 20-minute slots between 12 noon to 1 pm for employees who want to eat in the canteen. To be implemented for 50% capacity initially. 50% space to be left for employees bringing their own lunch
- Produce ingredient lists for meals ordered
- Provide system access through Intranet or Internet access for authorized employees/canteen staff

Advantages and Objectives

Advantages of the Canteen Ordering System:

Canteen: Helps in predicting the monthly inventory and reduce wastage of food. De-clogging

of the Canteen space. Faster better customer service, hassle-free collection of payments,

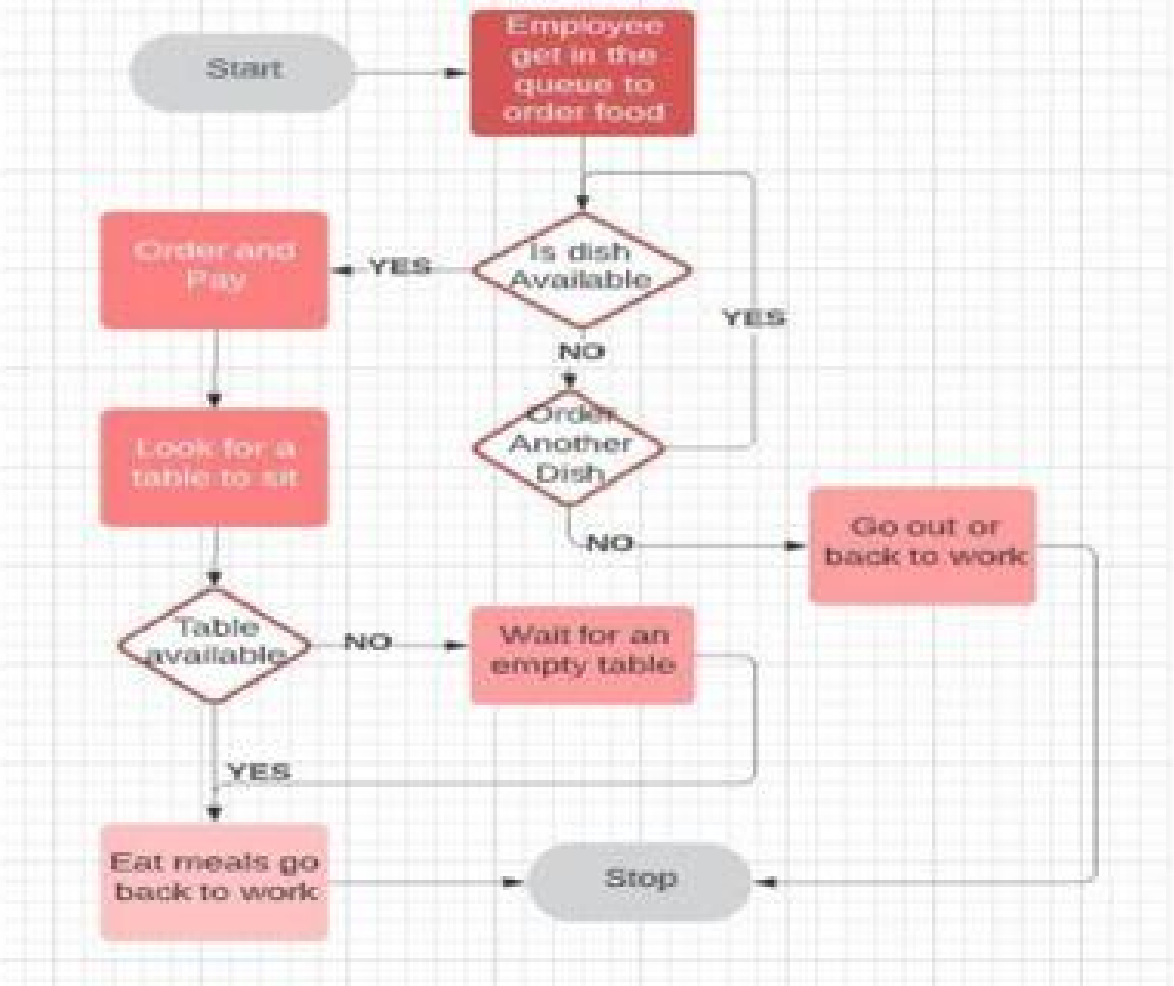
Customer: Saves Time, ease of ordering no queues, the option of eating at a workstation or Canteen, Variety of cuisine availability, Time flexibility, ease of payment.

Objectives:

- Reducing the time taken by employees to have lunch by 50%
- Increasing the cost efficiency of the Canteen, the operating costs should get reduced by at least 15% in the first year
- Enhancing the operating efficiency of the Canteen resulting in reduced manpower

- Making canteen a food efficient system with minimal wastage. At least 30%

Existing System

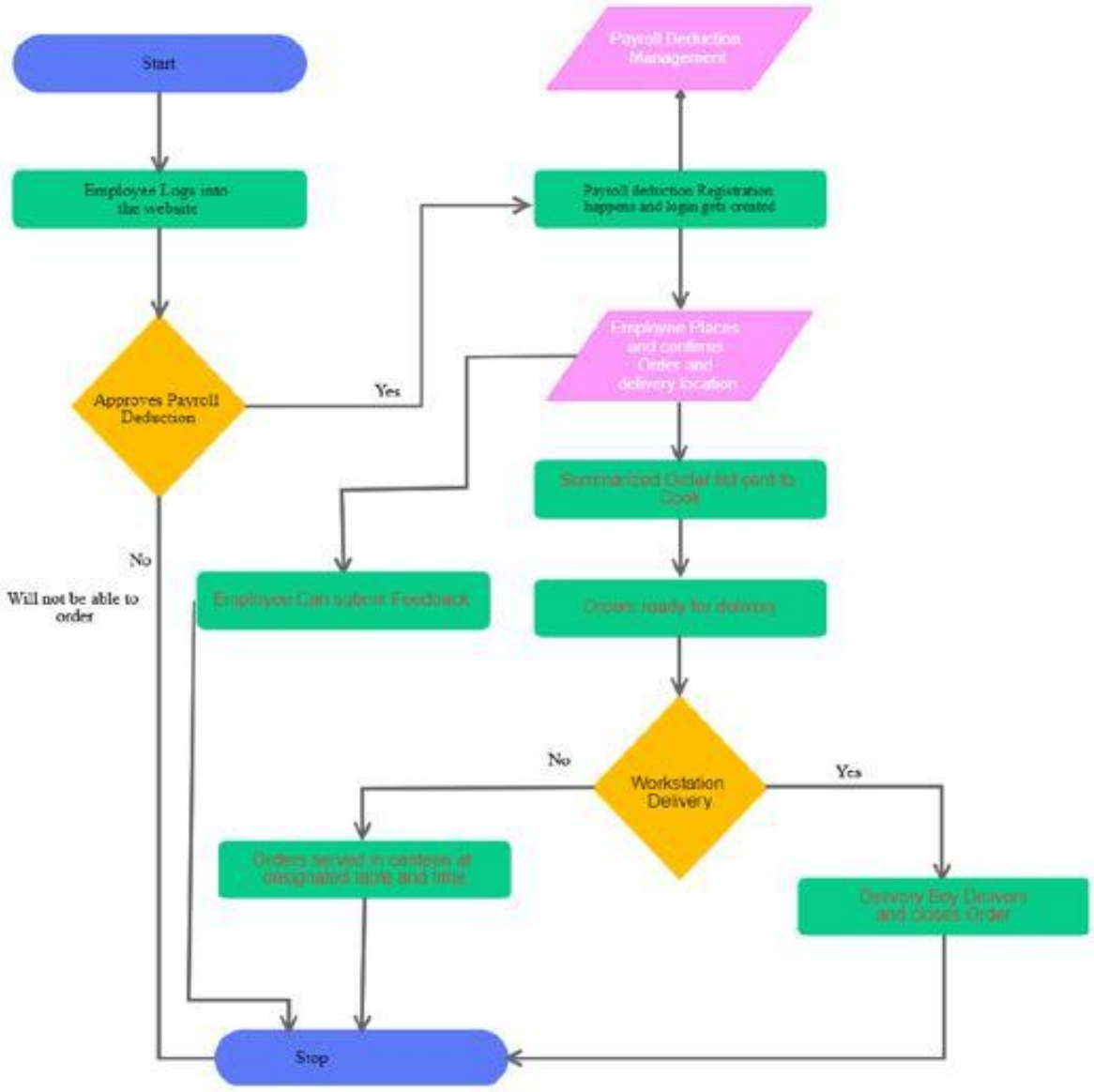


Proposed System

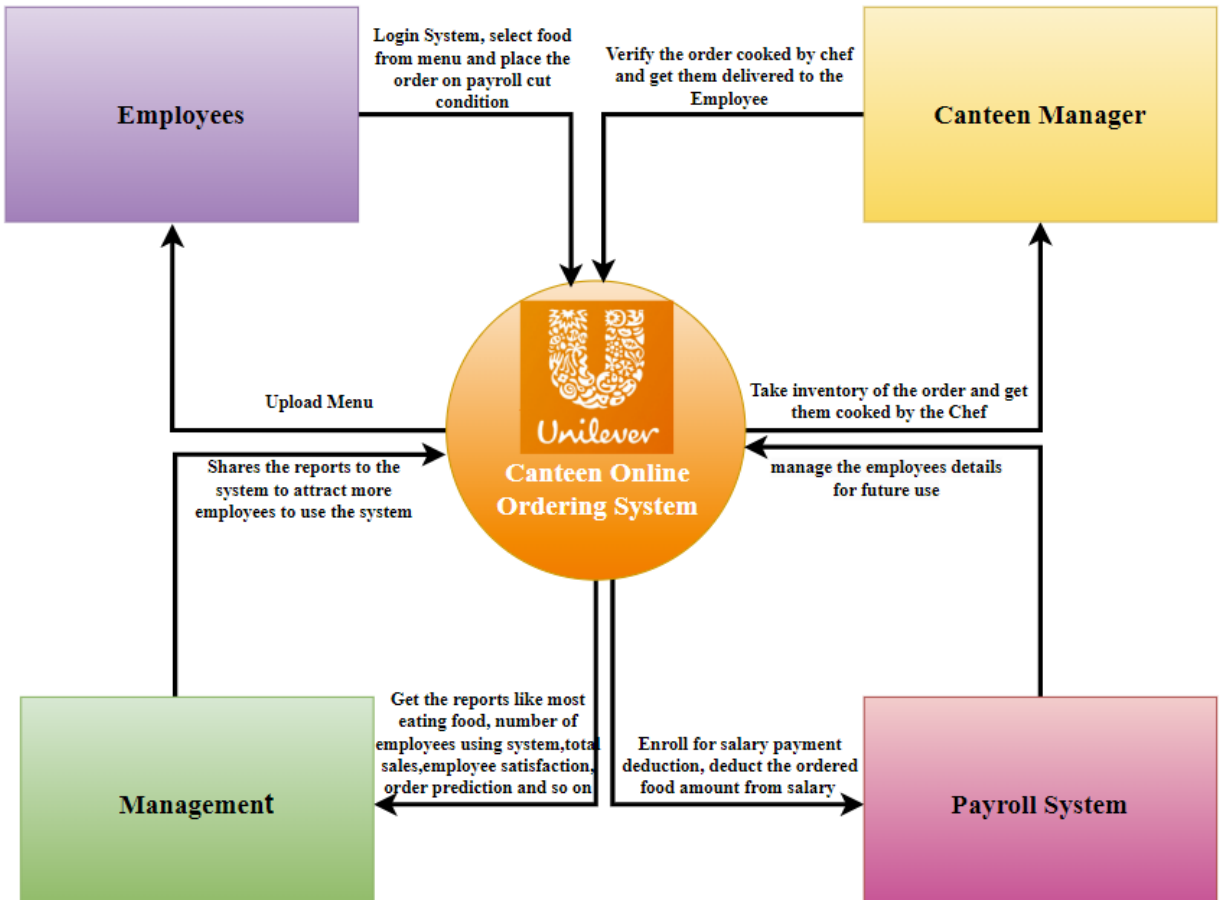
What is the proposed solution or system? Mention in points how the system itself will be for the user.

- User-friendly interface
- Enrollment through Salary deduction acceptance
- Ease of choice of Menu
- Can order more than one or a variety
- Can submit one or multiple orders
- Can view previous order details including total costs
- Choice of eating at workstation or Canteen

- Management can control offers that can be made easily over the Portal offering employees an improved experience.
- Enable cut off at selected time 11:00



Scope Using Context Diagram



Assumptions

- Existing canteen staff will continue to be there such as cooks, cleaners, helpers etc
- Existing infrastructure will suffice for the transformed structure
- Canteen servers can transform into delivery boys

Main features that need to be developed:

- A user-friendly web page for canteen ordering system with an up-to-date menu for the day along with the prices.
- Access to menu manager to who shall create and update the menu.
- A system that closes the lunch order after 11 A.M so that chefs have sufficient time to cook the ordered dishes.
- An access to the canteen manager to view the orders accordingly he would request delivery in time.
- For users can edit and close options which is user-friendly to manage their cart.
- An access to the meal deliverer after delivering the lunch he shall close the online customer order.

- When the meal deliverer delivers food along with requesting a feedback poll to the user. So the customer can submit feedback on one tap link.
- A payroll system that the webpage includes enrol option for users.
- A payroll system that will deduct the amount directly from the employee's salary account.
- Reports on popular dishes, reports on sales managed, order forecasting, and track system on the basis of feedback submitted by employees.

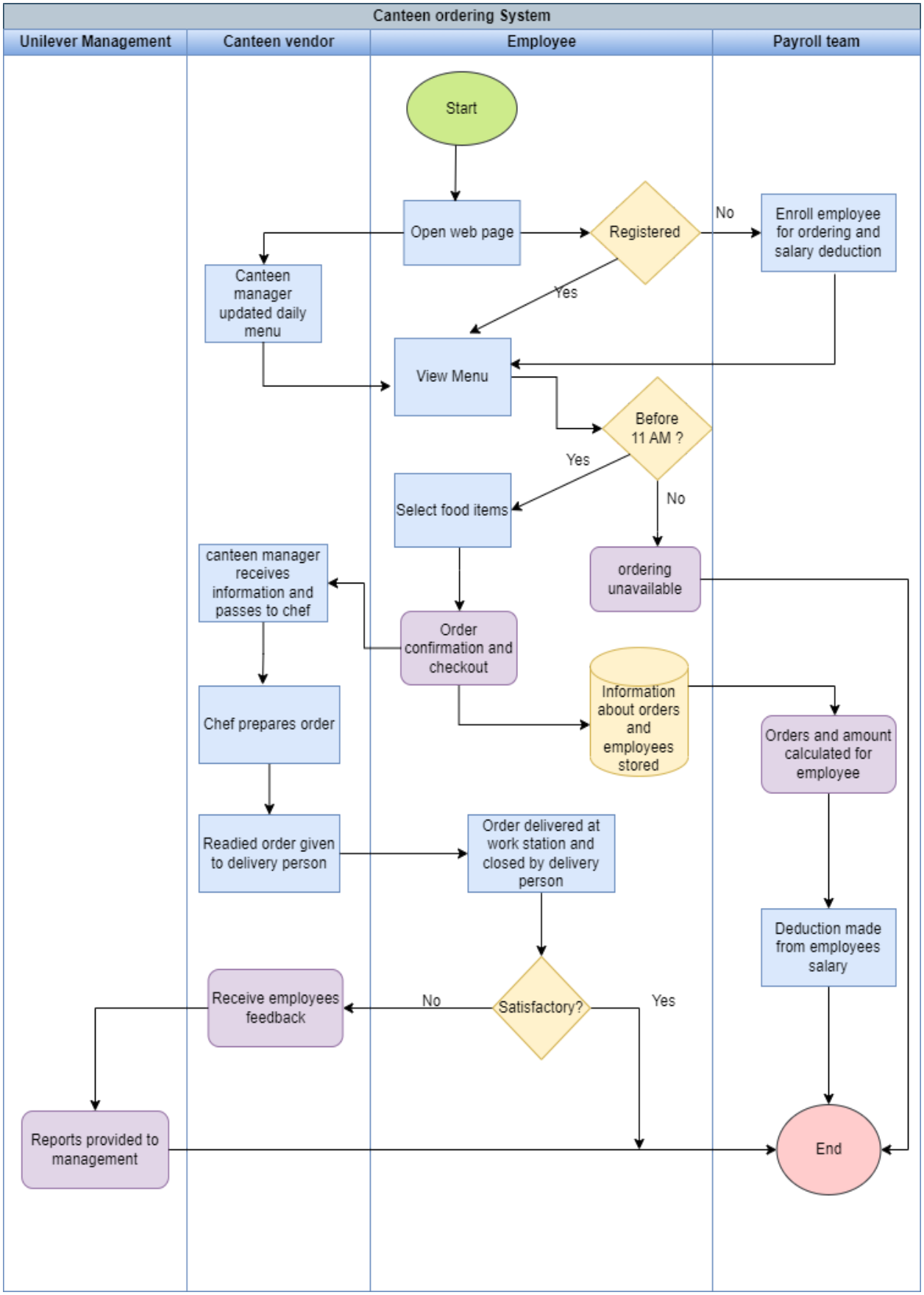
In Scope

- Mention the name of features and what they are used for.
- Online ordering system is only applicable to the Unilever UK office.
- Webpage shall capture food payroll registration, menu, order and feedback details.
- System shall support registered employee information done via the payroll system.
- System shall allow registered employees to log in via company credentials.
- System shall allow entry and maintenance of menus.
- System shall allow consolidation and delivery of orders
- System shall support inventory and wastage management.
- The system shall have Reporting module for required reports mentioned as part of the detailed requirement.
- System shall have Payroll deduction information generation and maintenance.
- System shall capture Manpower utilization details.
- The application shall mark delivery post-order delivery.

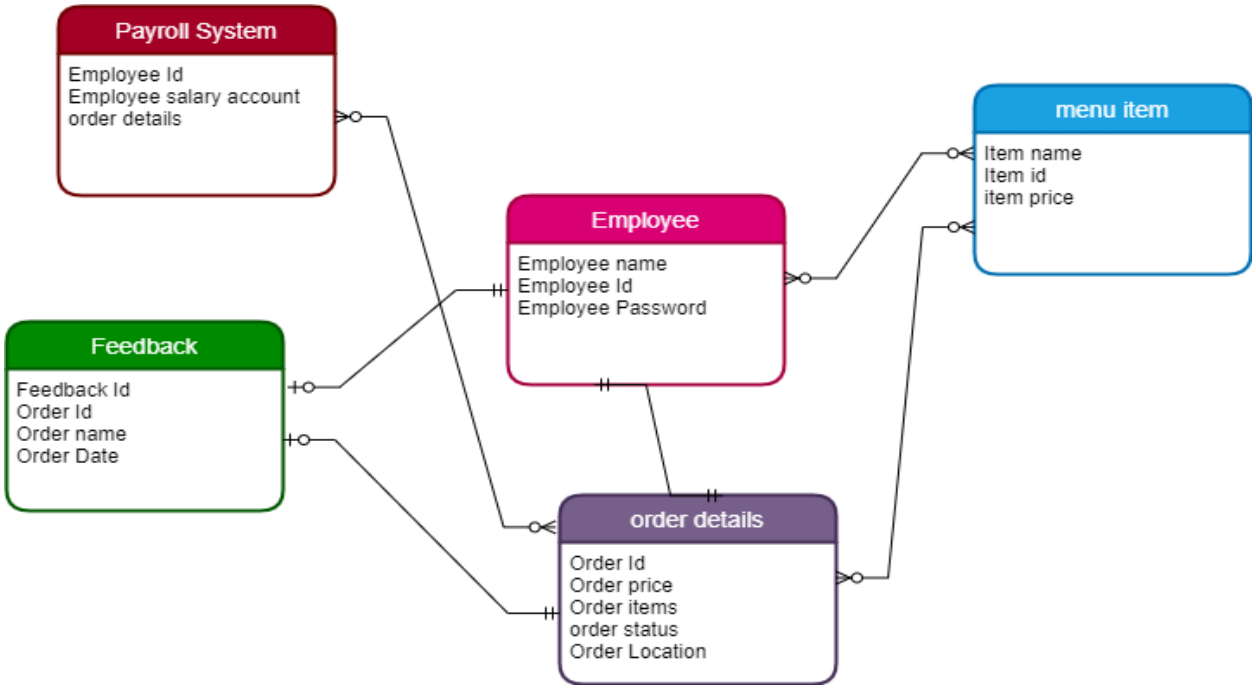
Out of Scope

- Choice of location Canteen / Work station in release 2
- Registration module in Payroll system to enrol for the online food order facility.
- Online ordering system implementation at every location of Unilever Office in the first release.

Draw an activity diagram for the system


Canteen ordering System
Unilever Management
Canteen vendor
Employee
Payroll team
Start
Open web page
Registered
No
Enroll employee for ordering and salary deduction
Yes
Canteen manager updated daily menu
View Menu
Before 11 AM ?
Yes
No
Select food items
ordering unavailable
canteen manager receives information and passes to chef
Order confirmation and checkout
Information about orders and employees stored
Orders and amount calculated for employee
Chef prepares order
Readied order given to delivery person
Order delivered at work station and closed by delivery person
Deduction made from employees salary
Receive employees feedback
No
Satisfactory?
Yes
Reports provided to management
End

ER Diagram for System



Business Requirements:

Business Objective 1:

- Reduce canteen food wastage by a minimum of 30% within 6 months following the first release.
- Scale: Value of food thrown away each month by examining the canteen inventory
- Previous - 25% wasted
- Must plan for Less than 15%

Business Objective 2:

- Reduce canteen operating costs by 15% within 12 months, following the initial release.

Business Objective 3:

- Increase average effective work time by 30 minutes per employee per day, within 3 months.

Business Objective 4:

- 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

Functional Requirements

- Users should be able to create accounts, log on and have password recovery.
- An administrator should be able to assign roles to a User, which reflect their position. e.g. Canteen Manager, Delivery Boy, Management, User (Employee/Customer) and create Incident management process
- Salary deduction acceptance to act as login and employee use his existing company credentials to log in. Employee ID and Workstation Details as login details.
- Roles should have access only to respective modules:
    - ➔ Canteen Manager Role – Amend Menus, create a variety of lists of Orders including for Delivery Boy
    - ➔ User Role – Select a Menu and place an order. Provide feedback on the order. View past orders, accept/deselect salary deduction option
    - ➔ Delivery Boy Role – View a list of Orders as defined by the Canteen Manager. Update an order to indicate delivered.
    - ➔ Management Role – Generate Reports, and have the capacity to have them sent by email.

- Web Interface to be able to add/change/remove menus. This includes adding the price for the menu.
- Inventory coming in to be recorded in the system and once the order gets prepared the inventory is shown as consumed. All the wastage also gets recorded and updated in the system
- Table management for 50% of canteen tables for employees wanting to eat in the canteen

Nonfunctional Requirements

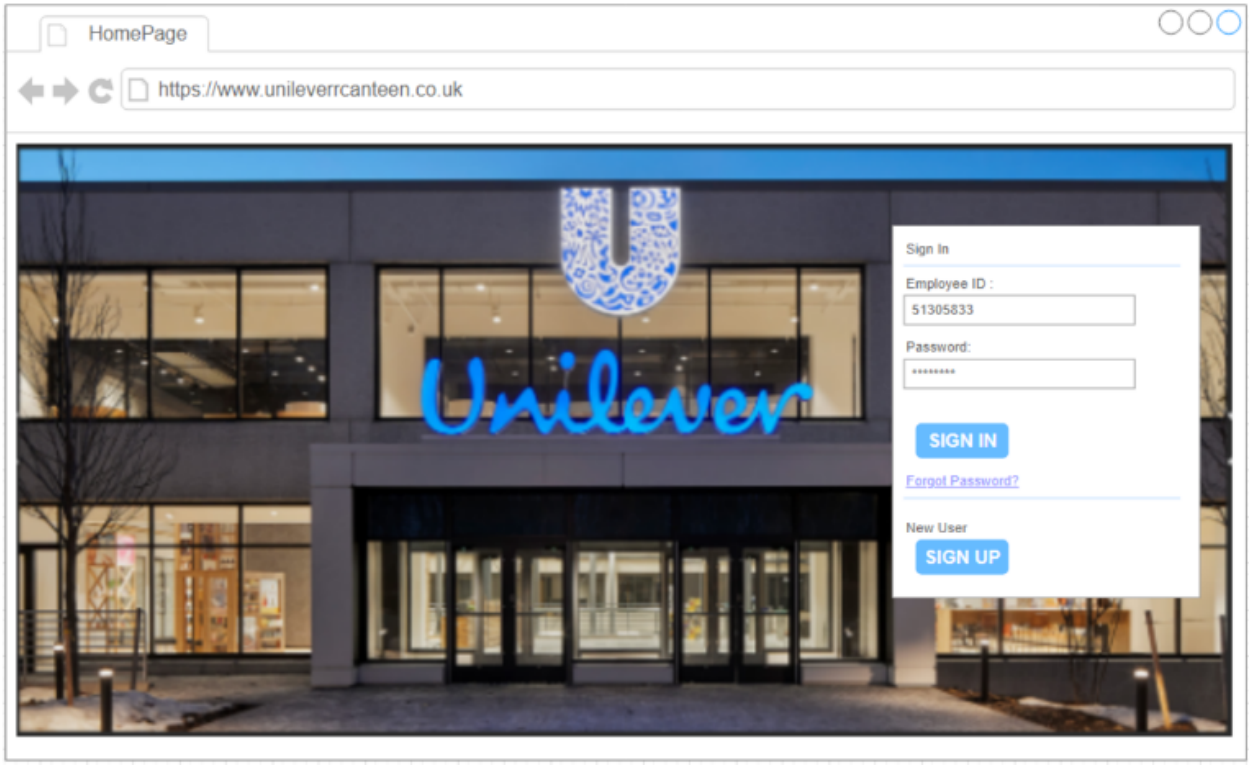
System Requirement:

- Employees should be forced to change their password every pre-determined period
- Order Transactions or feedback should be traceable
- The application should be low-maintenance requiring minimal manual intervention
- Can be used using Company Authorised Browsers.
- Orders will be archived after a predefined period.
- System should be stable to take the load of 1500 logins and ordering
- Webpage should be light so that rendering is fast for browsing and order placing

Usability:

- User-friendly and self-explanatory user interface preferable with pictures
- Webpage should be available on Intranet as well as internet
- All employee can browse but only those who accept payroll deduction will be allowed to order
- All activities of current canteen system will stop on the day of Go Live of Web application

Wireframes



CANTEEN MENU

HOT FOOD

JAFFLES -	
Cheese	2.50
Spaghetti	2.50
Baked Beans	2.50
Ham & Cheese	2.60
Ham, Cheese & Pineapple	3.00
LASAGNE 97% Fat Free	3.60
MACARONI & CHEESE 97% Fat Free	3.60
MEAT PIE	3.20
PARTY PIE or **PARTY SAUSAGE ROLL**	1.00
SAUSAGE ROLL	3.00
FLAME GRILLED BEEF BURGER w lettuce, cheese and tomato	4.00
CHICKEN BURGER with lettuce, cheese & mayonnaise	4.00
BAKED CHICKEN SCHNITZEL ROLL with lettuce, cheese, tomato & mayo	4.20
CORN COBETTE	1.20
NOODLES - Chicken or Beef	2.60
CHICKEN NUGGETS 80c each	(3)2.20
STEAMED DIM SIM	0.90
HOT DOG	3.00

SANDWICHES

Rolls 60c extra

SALAD - Lettuce, Tomato, Beetroot, Carrot & Cucumber	2.80
HAM & TOMATO	2.40
HAM CHEESE & TOMATO	2.60
CHEESE & TOMATO	2.40
CHEESE AND SALAD	3.00
EGG & LETTUCE	2.80
CHICKEN & SALAD	3.10
TUNA & TOMATO	2.90
TUNA & LETTUCE & MAYO	3.00
VEGEMITE	1.60
HAM	2.20
Extra Fillings	0.20

SALAD PLATES

all with lettuce, cucumber, carrot, tomato & beetroot

SALAD	3.40
EGG	3.60
CHICKEN	3.90
CHEESE	3.60
HAM	3.60
TUNA	3.60

SPECIALS

HEALTH PACK 1 6.00
SALAD ROLL, COOKIE & 200ML FRUIT BOX

HEALTH PACK 2 6.00
ANY 97% FAT FREE PASTA,
300ML FLAVOURED MILK (FRESH)

WRAPS

BBQ CHICKEN with lettuce & BBQ sauce	3.60
SWEET CHILLI CHICKEN with lettuce & sweet chilli	3.60

SNACKS

PIKELETS	0.80
POP CORN	2.00
FRUIT SALAD – SMALL	1.50
FRUIT OF THE DAY	0.80
JELLY CUP WITH FRUIT	1.50
ANZAC COOKIE	2.00
MINI MUFFINS (HOME BAKED)	0.80

DRINKS

FRESH FLAVOURED MILK (300ML)	2.50
Chocolate	
Strawberry	
Iced coffee	
WATER (600ML)	2.30
FRUIT JUICE (200ML)	1.50
Tropical	
Orange	
Apple	

ICE CREAMS

FROZEN ORANGE WEDGE	0.20
FROZEN PINEAPPLE RING	0.50
FROZEN FRUIT YOGHURT	2.00
ZOOPER DOOPER	0.80
SUNNY BOY - ORANGE, LEMONADE	2.00

FOODS MARKED WITH ☺ ARE GREEN FOODS & CAN BE EATEN EVERYDAY.

Thank you