Canteen Ordering System for Unilever

Project Task

1. Identifying stakeholders – Create a list of stakeholders (as taught in Business Analysis Planning and Monitoring Knowledge Area)

- **Stakeholders**

#	Actor	What he can do on the Software Created
1	Employees	View the up-to-date menu. Place, edit, and confirm orders. Receive meal deliveries at workstations. Provide feedback. Enrol for salary payment deduction
2	Menu Manager (Canteen employee)	Create and update the menu. Coordinate with the canteen manager for inventory.
3	Canteen Manager	View and manage orders placed by employees. Take inventory of ordered dishes. Request deliveries to employees' workstations. Coordinate with the kitchen for food preparation.
4	Delivery Boy	Deliver meals to specified workstations. Close online customer orders after delivery.
5	System Administrator	Ensure system scalability and performance. Handle technical issues and updates.
6	HR/Payroll Department	Manage salary deductions based on the payroll system calculations
7	Management	Receive and analyse reports on popular dishes, system usage, and employee satisfaction. Make strategic decisions based on the provided data.
8	IT Support Team	Provide technical support and address system-related issues.

2. Identify the problem statement in this system.

- **Problem Statement**

The existing canteen system at Unilever's UK offices faces several challenges, leading to inefficiencies and dissatisfaction among employees.

The key problems are as follows:

- **Time Inefficiency**
- **Limited Food Choices and Wastage**
- **Operational Inefficiency**
- **Employee Dissatisfaction**

3. Identify objectives of the new Canteen Ordering System.

- **Objectives of the Canteen Ordering System:**

The client aims to address these challenges and improve the overall efficiency and satisfaction of the canteen system by implementing a Canteen Ordering System. The key objectives are:

1. **Reduce Food Wastage:**
   - Decrease canteen food wastage by a minimum of 30% within 6 months.
2. **Cost Reduction:**
   - Reduce canteen operating costs by 15% within 12 months.
3. **Time Optimization:**
   - Increase average effective work time by 30 minutes per employee per day within 3 months.
4. **Automation and Manpower Reduction:**
   - Automate the ordering process and food delivery to operate with lesser manpower.

- **Impact of the Canteen Ordering System:**

Implementing the Canteen Ordering System is expected to have several positive impacts, including:

- Time Savings
- Increased Food Choice
- Improved Work Life and Productivity
- Food Wastage Reduction
- Cost Reduction

- **Success Criteria:**

- Food wastage reduced to less than 15%.
- Canteen operating costs reduced by 15%.
- Average effective work time increased by 30 minutes per employee per day.
- Successful automation of the ordering process and food delivery.

4. Create as-is and future process map (using flowcharts). You can use any of the popular tools in the market like Microsoft Visio, Lucid Chart, Creately, Pidoco, or Balsamiq.

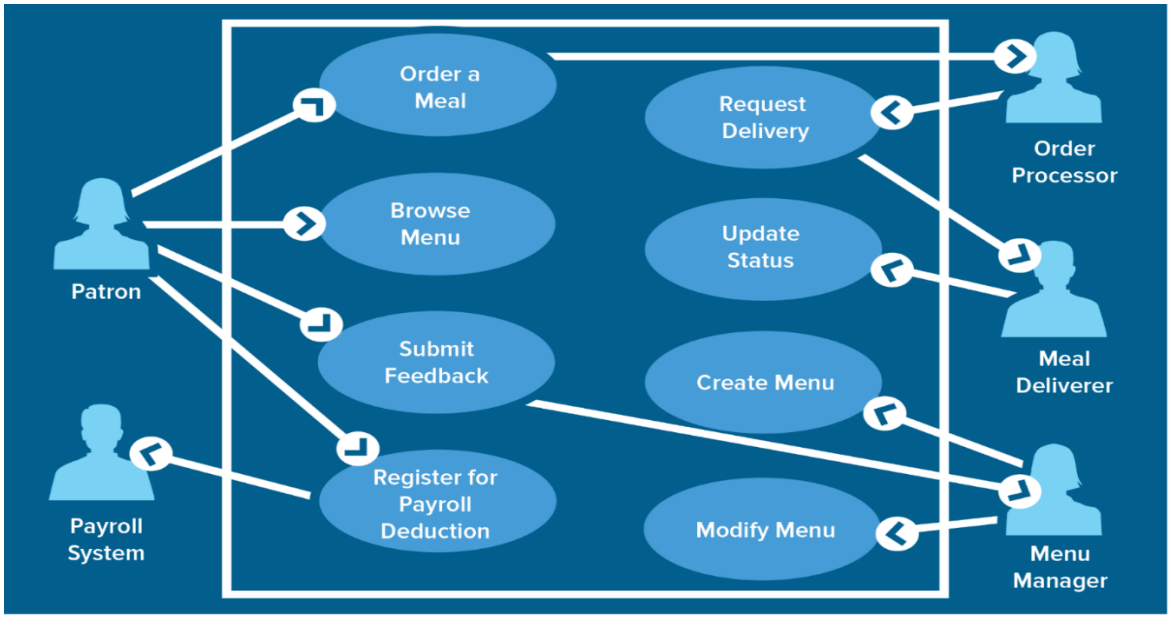
- **As-Is Process Map:**

  - Employees queue for food during lunch hours.
  - Limited food choices lead to dissatisfaction.
  - Manual order taking and food preparation.
  - Food delivered to a common area.
  - Employees spend additional time traveling to and from the canteen.

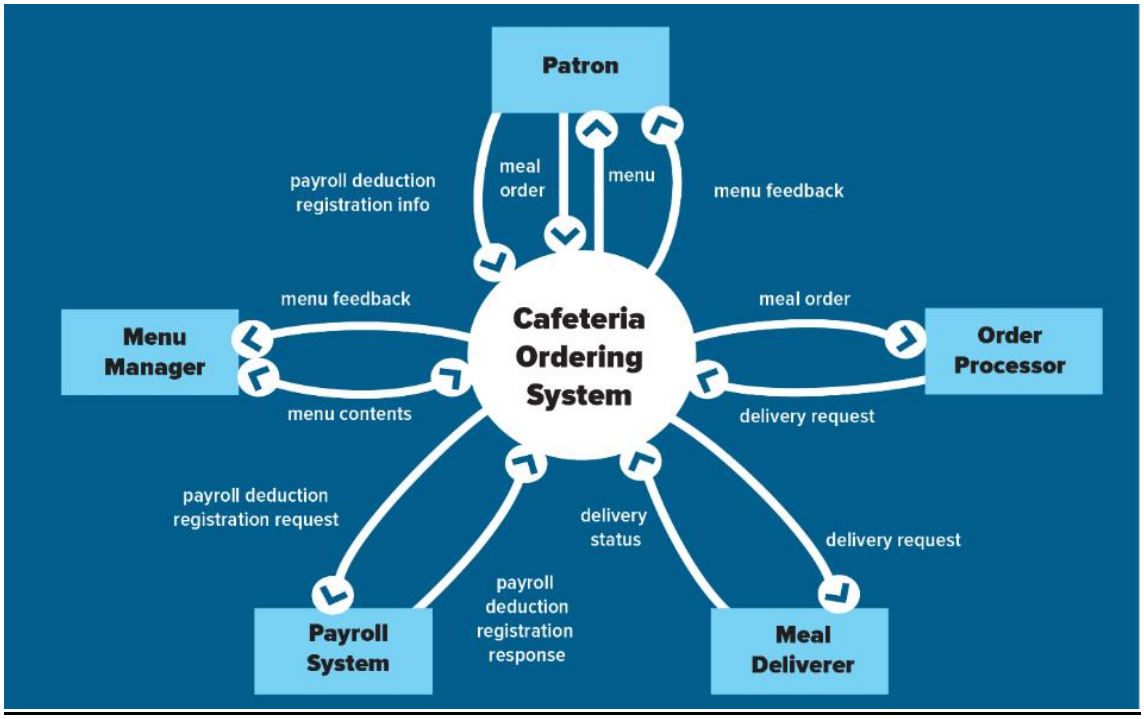
- **Future Process Map:**
  - Employees access an online menu.
  - Orders placed by 11 am for efficient food preparation.
  - Canteen manager processes orders and coordinates with the chef.
  - Delivery to employees' workstations.
  - Automated system feedback.

5. **<u>As a Business Analyst working on this project, find out the scope of the Canteen Ordering System. To find the scope you can use the case diagram (UML) or context diagram for the same.</u>**

- **SCOPE using Use Case Diagram (UML)**



- **SCOPE using Context Diagram**



6. Write down the main features that need to be developed.

- Main Features:

1. Menu Management:
- Display up-to-date menu with prices.
- Allow Menu Manager to create and update the menu.

2. Ordering System:
- Users can place lunch orders until 11 am.
- Users can select, edit, and review their orders before checking out.
- Order confirmation and checkout process.

3. Order Processing:
- Canteen manager can view orders placed by employees.
- Canteen manager takes inventory and coordinates with the chef.

4. Delivery System:
- Request delivery to employees' workstations by the canteen manager.
- Meal deliverer (delivery boy) delivers lunch to the employee's desk.
- Close online customer order after successful delivery.

5. Feedback System:
- Allow customers to submit feedback on food items or the delivery system.

6. Payment and Payroll Integration:
- Employees enroll for salary payment deduction.
- Payroll system handles deductions based on the total number of dishes ordered.

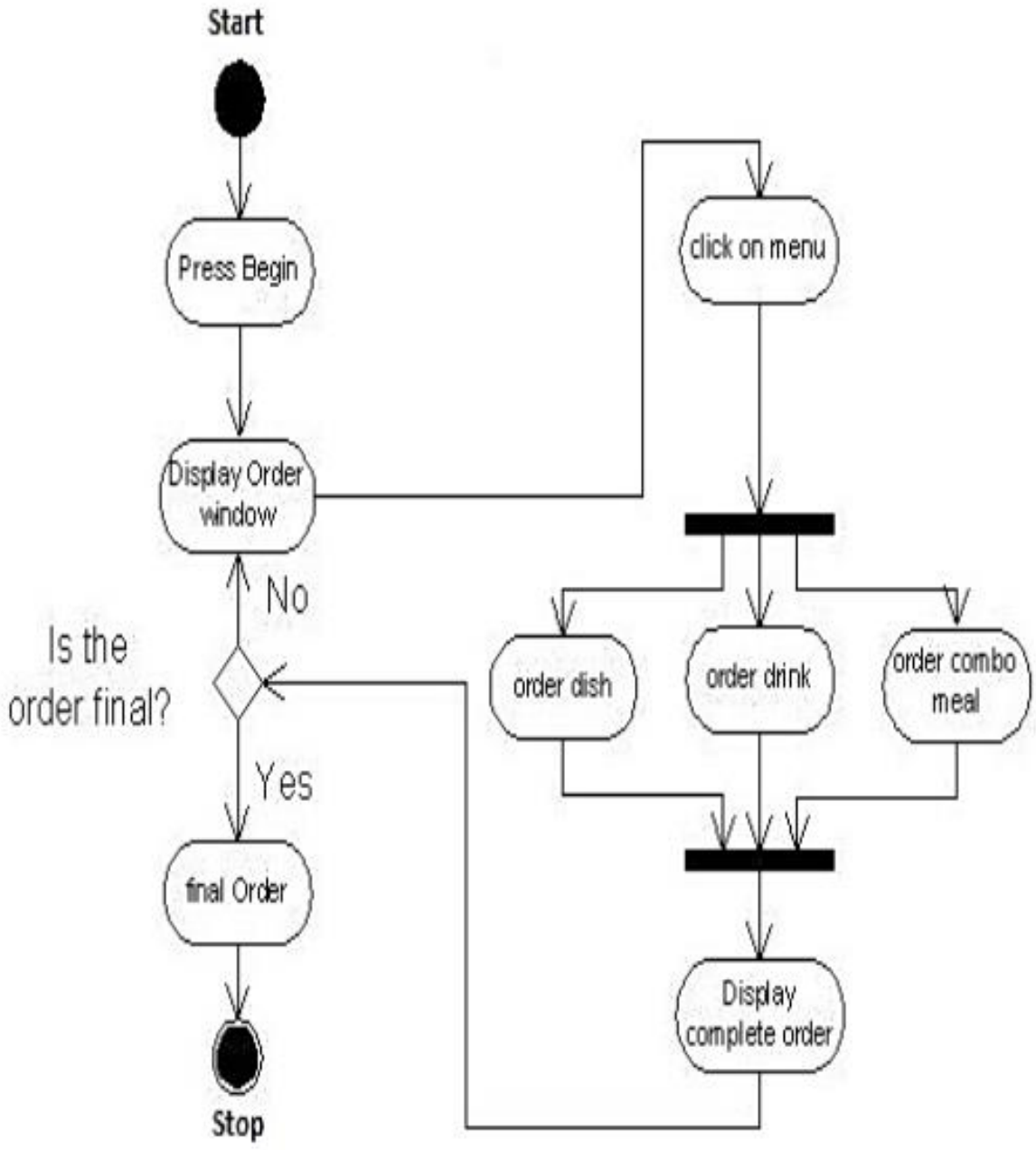
7. Reporting:
- Most popular dishes report.
- Number of employees using the system report.
- Employee satisfaction report based on feedback.
- Daily sales report.
- Total monthly earnings report.
- Order forecasting report.

7. Write the in-scope and out-of-scope items for this software.

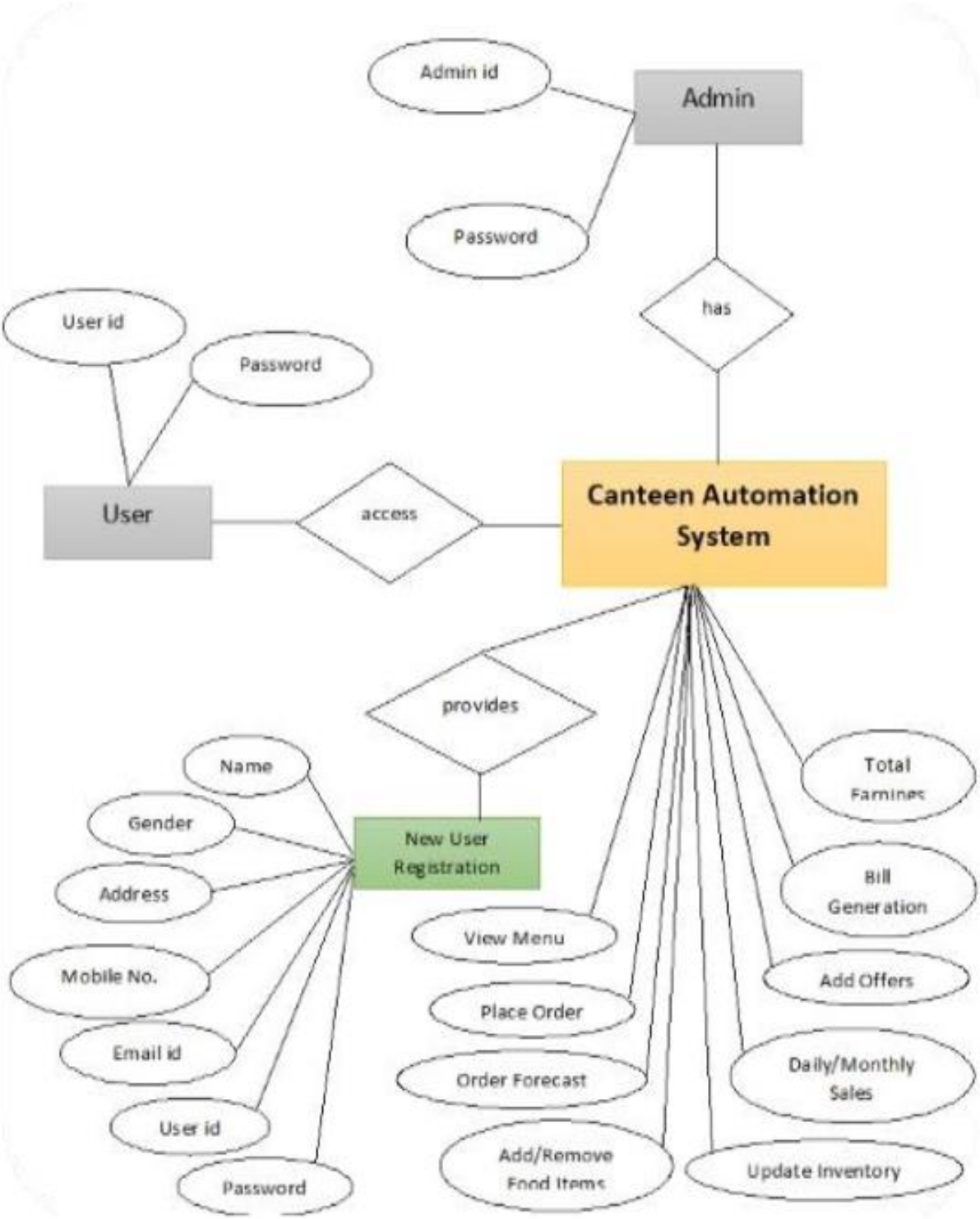
- **IN SCOPE**
  - **Login –** The users of the system Waiter/Manager/CEO will be able to login using their employee IDs & passwords.
  - **Creating Menu –** The Manager will be able to add new menu items.
  - **Modify Menu –** The Manager will be able to modify the price of any item existing in the menu.
  - **Delete Menu –** The Manager will be able to delete any existing menu items under the selected category.
  - **Taking Orders –** The Manager; will be able to track orders of employees
  - **Generate Bills –** The system will be able to generate the bill of the lunch order placed by employee.
  - **Fetching Reports –** The CEO will be able to extract different types of reports based on the requirements specified.
  - A log out feature will be added so that the canteen employee/Manager/employees using the system can log out once they are done with their work.
  - Delivery boy should be able to close delivery order upon delivering.

- **OUT OF SCOPE**
  - Payment via cash, debit card, mobile wallets, credit cards is currently out of scope.
  - Delivery of food within the same campus.
  - Any demand for training to new or existing user after two weeks.
  - Any maintenance request after two months of system rollout.

8. **Draw an activity diagram for the system.**



9. <u>Draw an ER diagram of the system.</u>



10. Write out the business requirements, both the functional and nonfunctional requirements.

➢ FUNCTIONAL REQUIREMENTS

- Menu creation
- Menu deletion
- Menu editing / updation by menu manager
- Order creation by employee
- Order confirmation
- View orders by order processor
- Meal delivery closure in the system
- Feedback submission by emplyees
- Payroll deduction facility to be offered to users
- Payroll deduction calculations
- Following Report generation
  - Which dishes are most popular?
  - How many employees are using the system?
  - Satisfaction of the employees on using the system. This should be tracked on basis of feedback submitted by the employees.
  - Sales for each day
  - Total monthly earnings.
  - Order forecasting i.e. predict which items are ordered at what time of the day.

➢ NON-FUNCTIONAL REQUIREMENTS

- **System Requirement:**

  Scalability and performance: this canteen ordering system is required to support a volume of 1500 employees ordering. Webpages should be light and render fast.

- **Usability:**

The screens should be self-explanatory and very user friendly. Management would not want employees not ordering from the system as they cannot understand the screens and data fields on screen. The users should not find the system cumbersome.

- **Environments**

We are going to be creating and maintaining the program in Java. We chose Java because it will not change much over time and if we make it well, there will be very little maintenance to be done on the code.

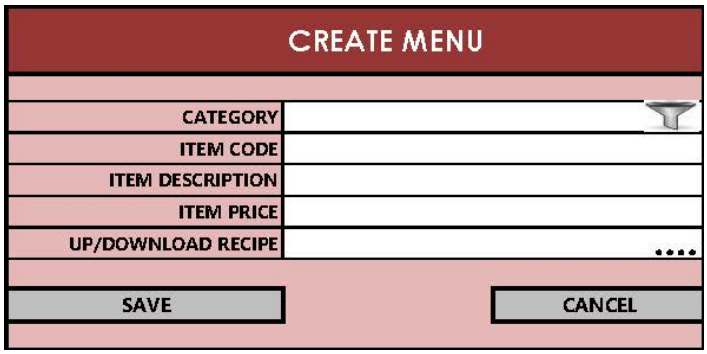
11. Draw wireframes or mock screens for any two of the features.

➢ CREATE MENU –

The user Manager will be able to create a new menu item.

Pre-Condition: The user with designation Manager can only access the create menu option.

Trigger: The user needs to add a menu item to the restaurant menu.



Basic Flow: The user can create new menu item.

1. The user will click on the menu tab present on the home page.
2. A page with 3 links (Create Menu/Modify Menu/Delete Menu) will be displayed.
3. The user clicks on Create Menu link.
4. A new page as below opens.
5. The user selects category from the drop-down list.
6. The user enters item description.
7. The user enters price for the menu item.
8. The item code auto populates.
9. The user clicks on Save.
10. New menu item created.

Exception Flow: The user enters an already existing item description.

Branch Point: Basic Flow, Step 9

1. System throws an error message stating that the item exists.
2. The user clicks ok.
3. The page clears all the textboxes & returns to the previous page.

Data Elements:

Field Name	Field Type	Data Type	Mandatory	Editable	Remarks
Item Category	Drop Down List	Text	Y	Y	Predefined 5 categories
Item Description	Textbox	Alphanumeric	Y	Y	
Item Price	Textbox	Numeric	Y	Y	
Item Code	Textbox	Alphanumeric	Y	N	System should auto populate