

Project Proposal

Section 1: Domain Description

Our objective is to construct a web-based **Smart Refrigerator Management System** that allows the user to manage the refrigerator, its settings and contents in an efficient manner. The portal enables the user to handle the refrigerator system remotely, eliminating direct human interaction. It maintains a list of items stored in it and their important details such as expiry and usage. This helps the user view the contents of the refrigerator while grocery shopping and prevents food wastage by keeping a track of the expiry date.

The databases maintained include a User Database, Category Database (such as Dairy, Vegetables, Fruits etc), Refrigerator Contents Database (for each user and category) and a Shopping List Database.

Section 2: Functionality Supported

1. **User login and registration** to support multiple user refrigerators.
2. **View** current contents of the refrigerator according to each category, displaying item information such as quantity available, expiry date, location in the refrigerator etc.
3. **Update** the contents of the refrigerator upon addition of a new item and removal of a current item.
4. **Maintain a shopping list** of items based on quantity available and the expiry date to keep the refrigerator stocked with fresh items at all items.
5. **Maintain temperature setting** of each shelf and adopt a **warning system** to ensure that items are placed at a suitable temperature location.
6. Support a **feedback and maintenance system** for each refrigerator.

Section 3: GUI Interfaces

1. **Login Screen** to login a user.
2. **Home Screen** that directs the user to pages that give access to the above-mentioned functionalities such as - viewing and updating the contents,

handling the shopping list and managing refrigerator settings. The home page also displays the information of the user and the refrigerator.

3. View Contents Screen

4. Update Contents Screen (add or remove contents)

5. Shopping List Screen

6. Refrigerator Settings Screen

Section 4: Technology Used

SQL will be used for database management.

HTML, CSS will be used for web development.

Python scripting language will be used for interfacing and functionality.

Section 5: Group Members

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