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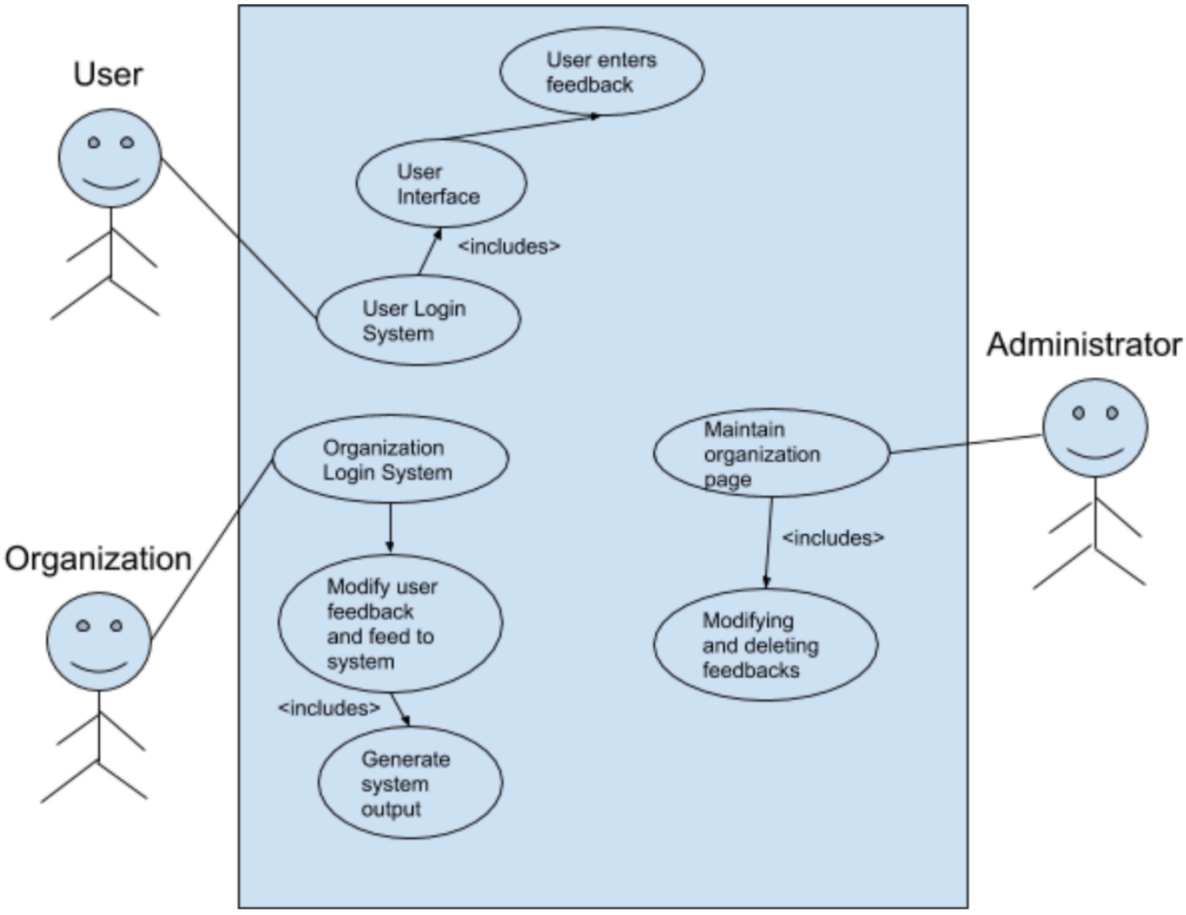
COURSE: CSC 415 – 01
ASSIGNMENT 4: OPEN SOURCE SOFTWARE: ANALYSIS AND DESIGN
DATE: APRIL 6TH 2018

1. **DESIGN**

a. USE CASE DESCRIPTION



USE CASE DIAGRAM - FOOD WASTE AWARENESS

IN – DEPTH USE CASE DESCRIPTIONS

<u>CONSUMER USER</u>

- User Login System
  - User Interface
    - User enters feedback in feedback slot

- Exception: Login status
    - Correct Login Details: Successful login to user Interface(Homepage)
    - Incorrect Login Details: Failed login resulting in login again till successful

- Contact Page
    - About user details
        - Name, Phone number, email address etc.

ORGANIZATION

- Organization Login System
    - Modify user feedback and send to system
        - Generate system output to be sent to restaurant

- Organization Details
    - Name, phone number, email address etc.

SYSTEM ADMINISTRATOR

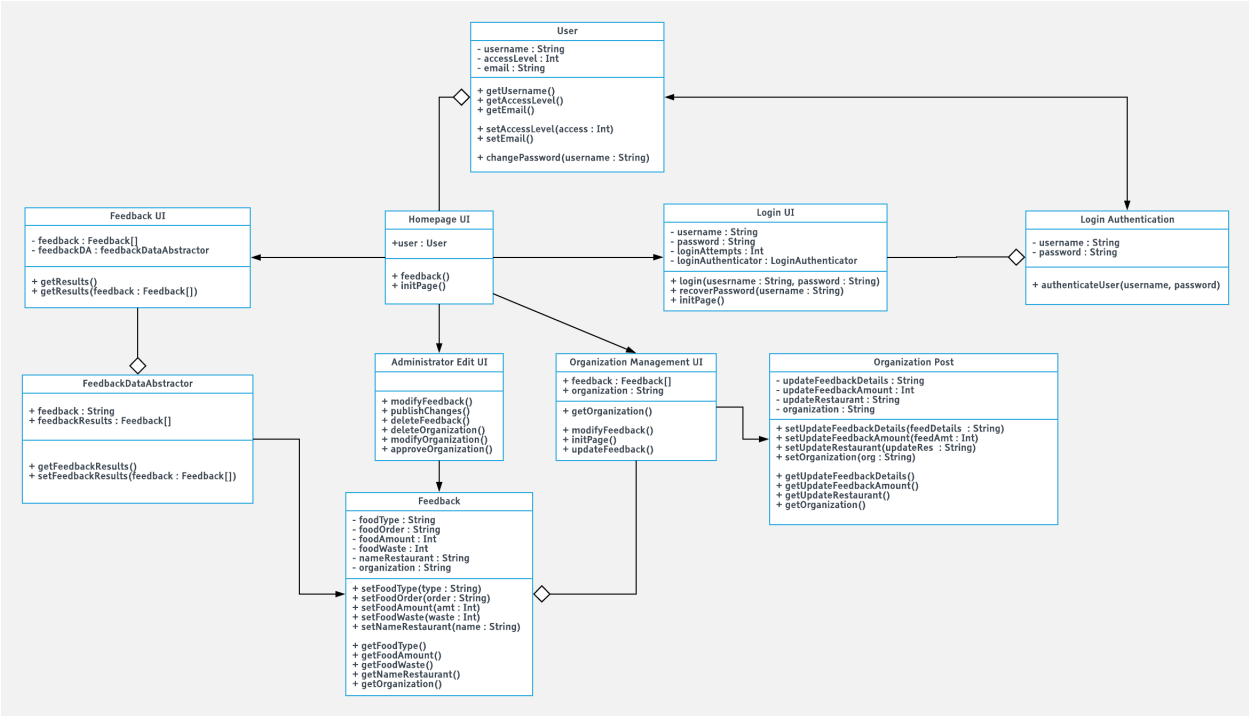
- Updates organization page
    - Modifies user feedback

- Perform system backup
    - Backup on database automatically

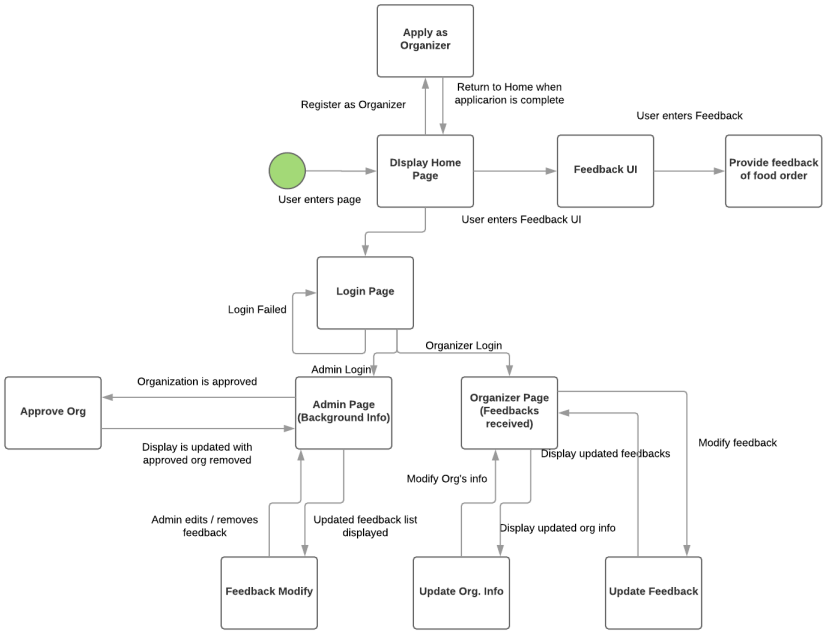
- Add/ Remove users from the system
    - Potentially automate spam detection

b. DETAILED DESIGN CLASS DIAGRAM

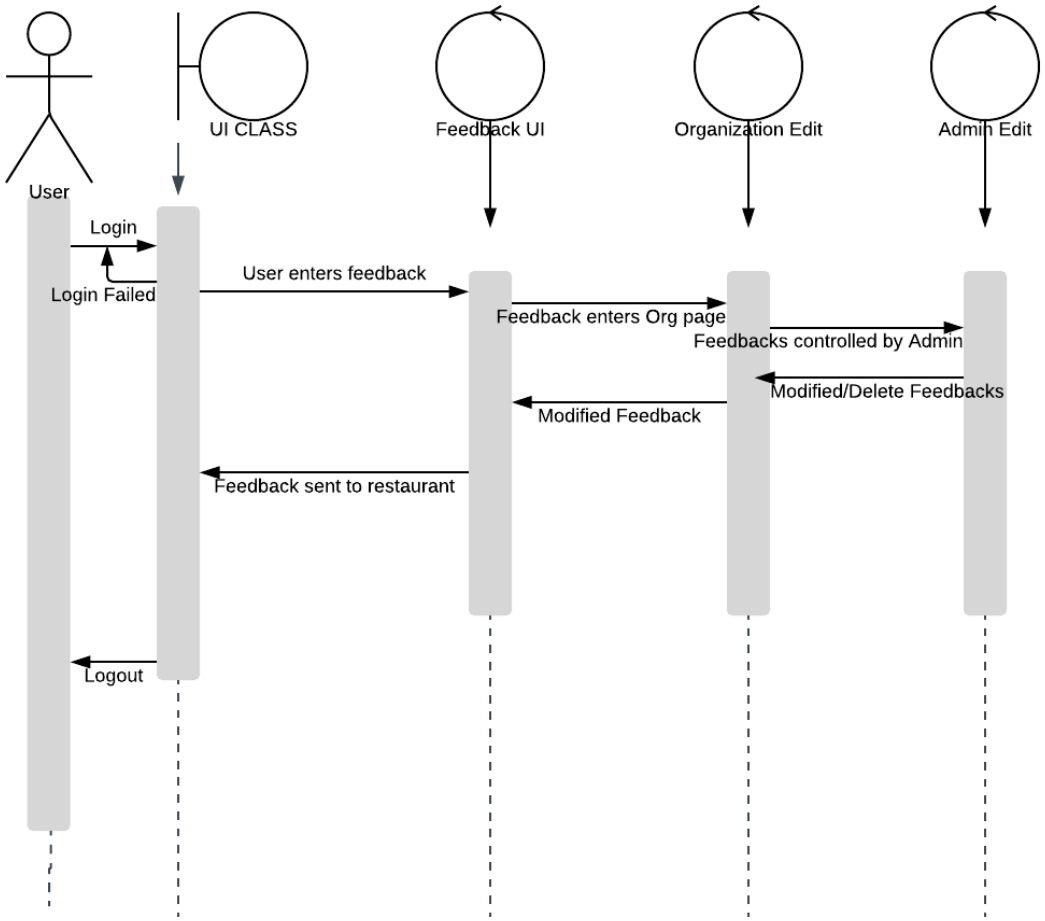
Class Diagram Link for Better Readability:
https://www.lucidchart.com/documents/edit/ed4b8ee9-da59-42fb-9d28-4537e7207414/0



c. STATE CHART



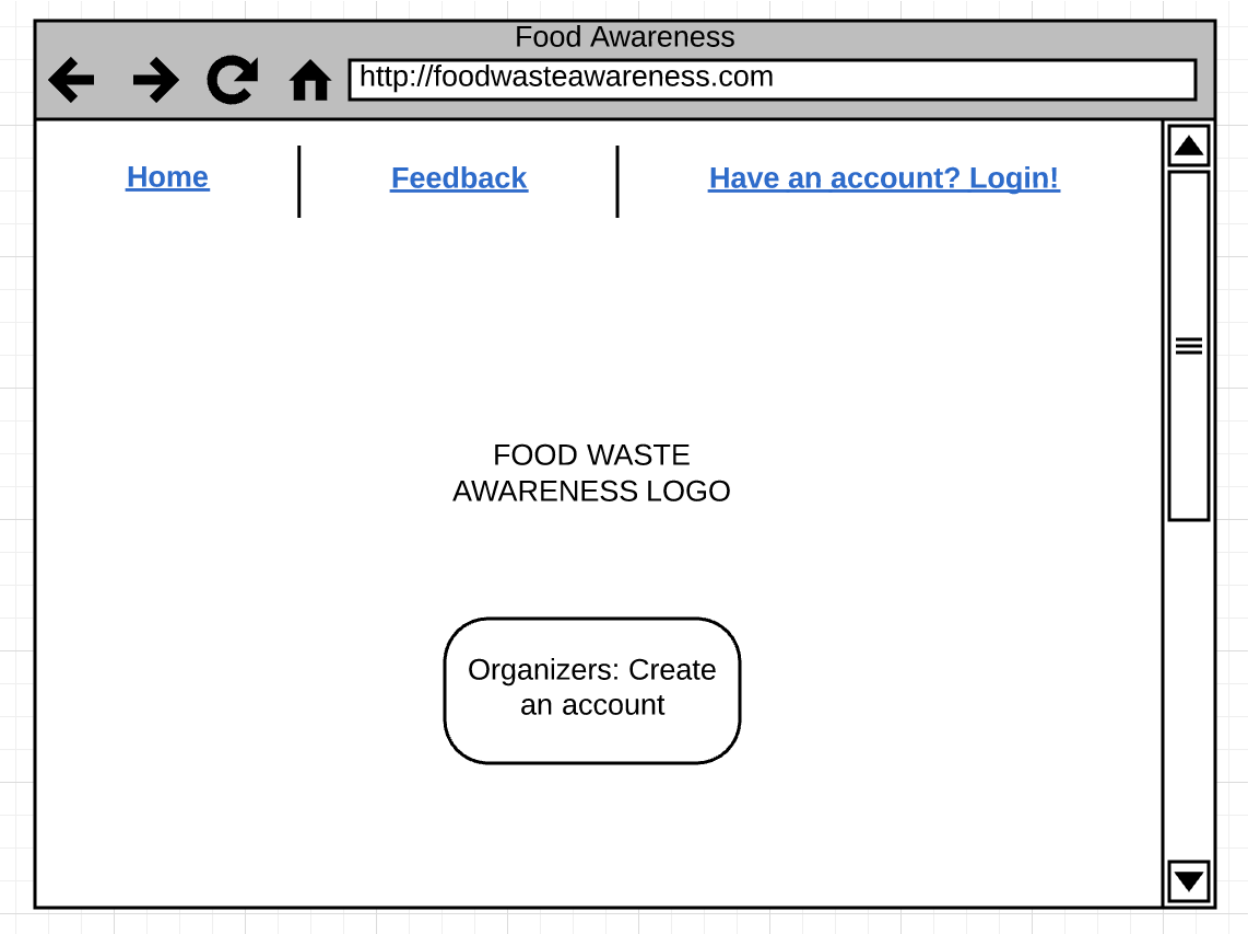
d. SYSTEM SEQUENCE DIAGRAM



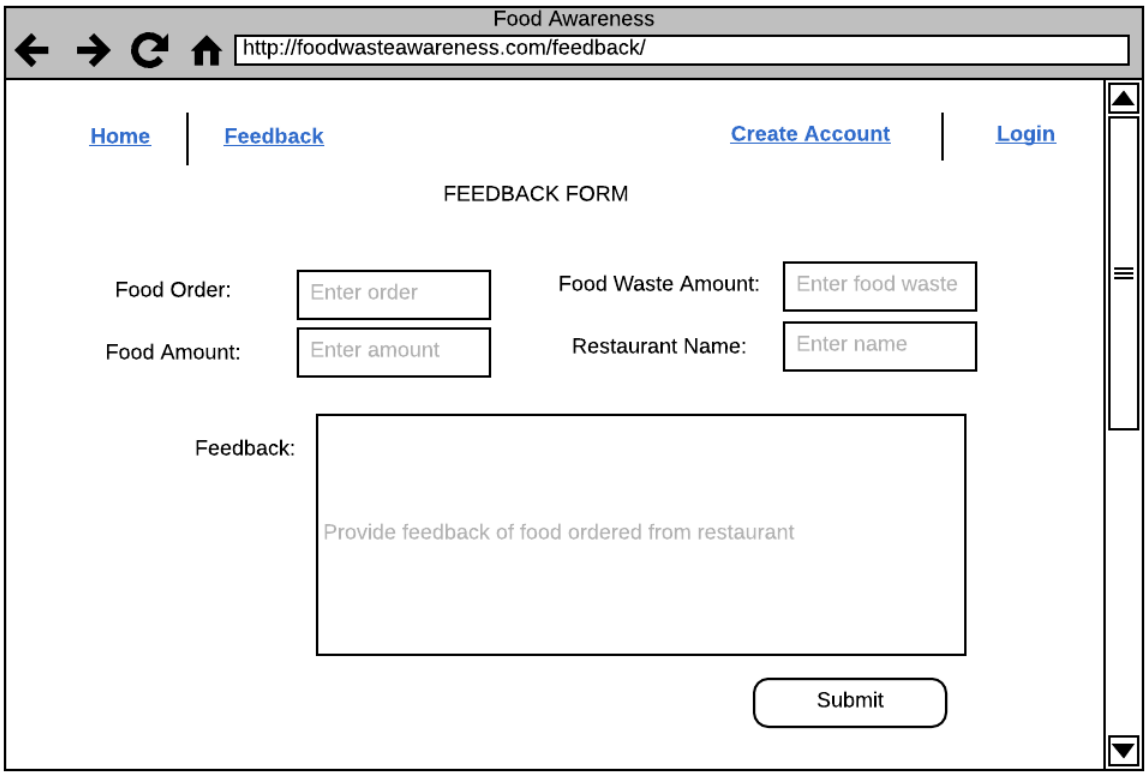
2. USER INTERFACES

UI DESIGN:

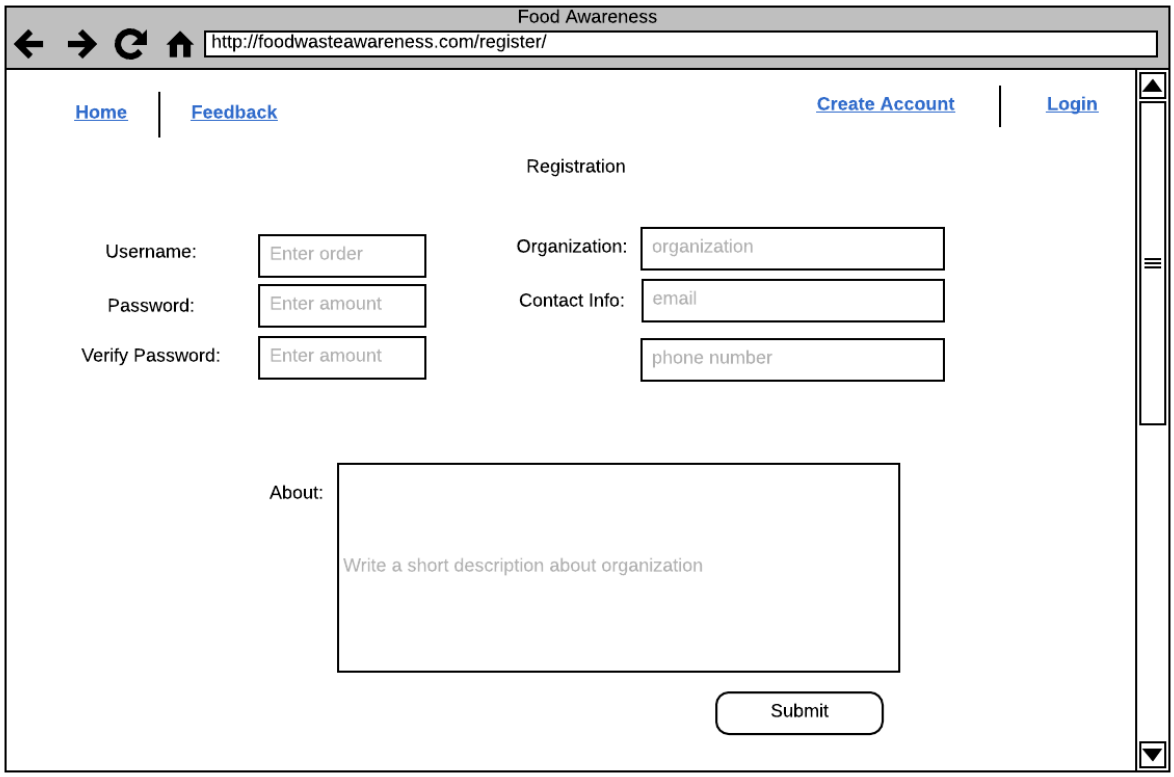
Homepage


Food Awareness
http://foodwasteawareness.com
Home
Feedback
Have an account? Login!
FOOD WASTE
AWARENESS LOGO
Organizers: Create an account

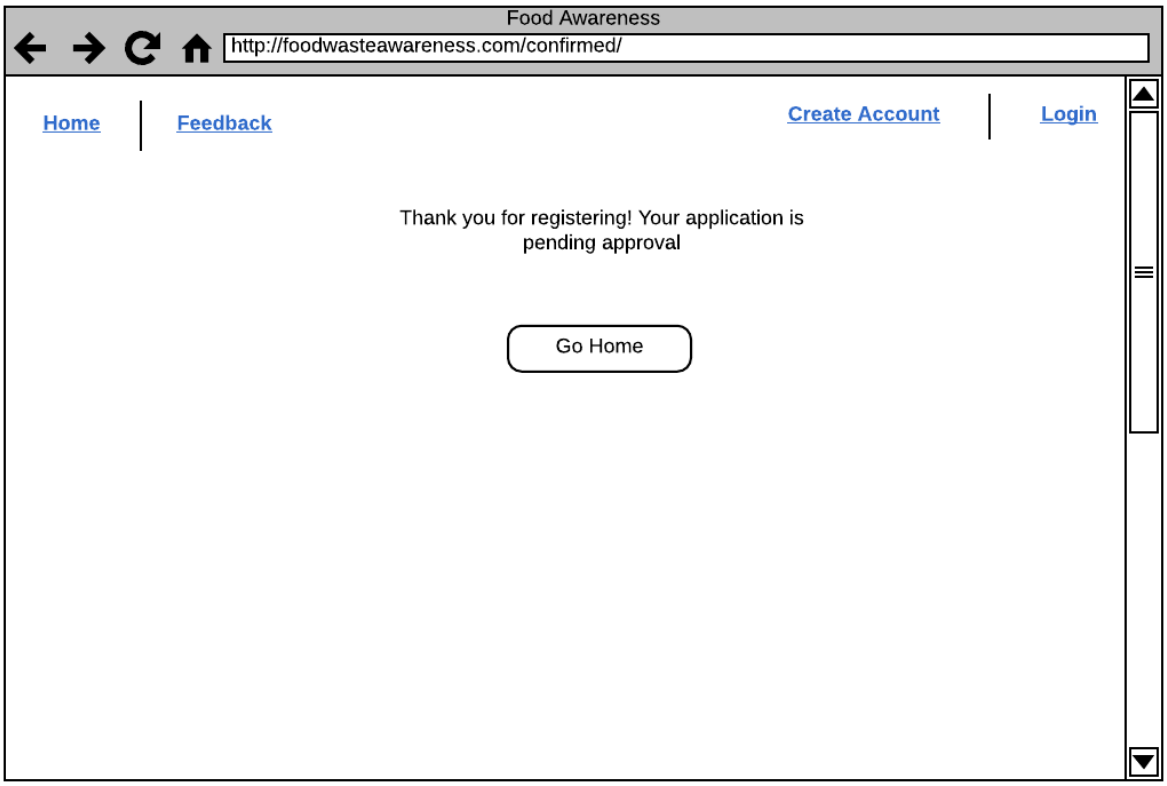
Feedback


Food Awareness
http://foodwasteawareness.com/feedback/
Home
Feedback
Create Account
Login
FEEDBACK FORM
Food Order:
Enter order
Food Waste Amount:
Enter food waste
Food Amount:
Enter amount
Restaurant Name:
Enter name
Feedback:
Provide feedback of food ordered from restaurant
Submit

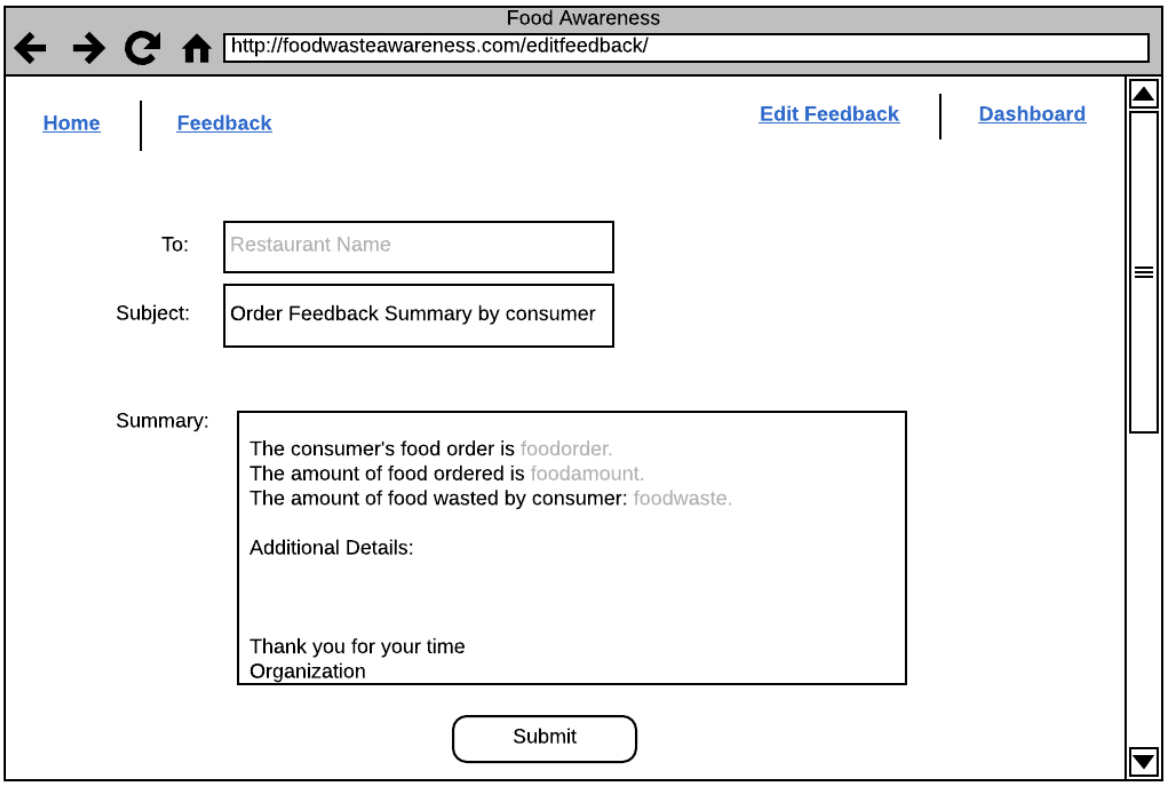
Register



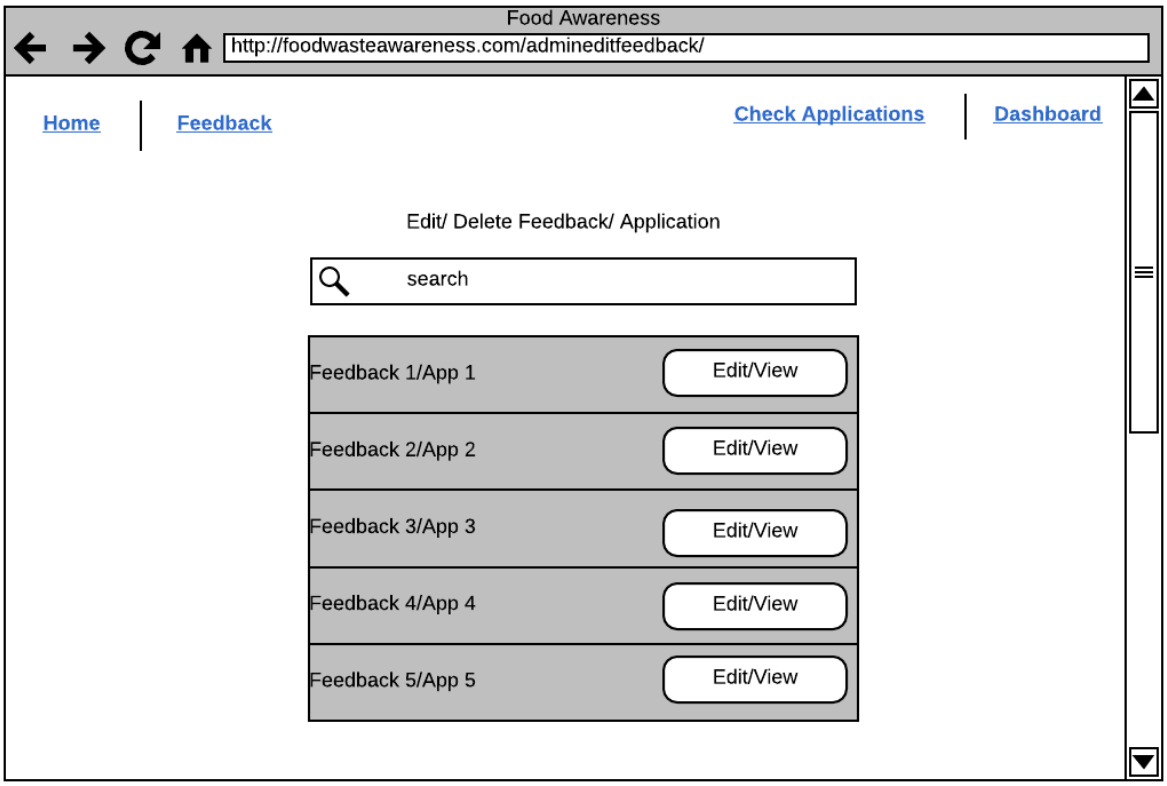
Register Confirmation



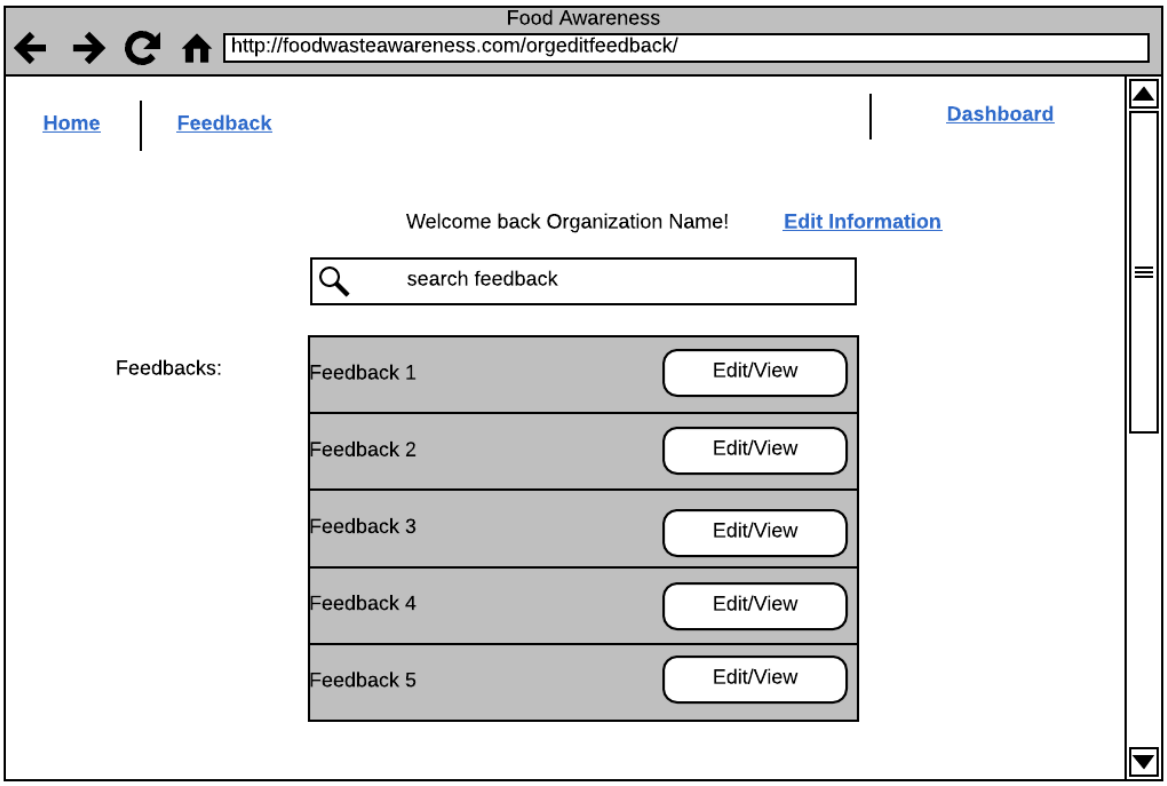
Edit and Submit Feedback(Organization)



Admin Dashboard



Organization Dashboard



Eight Golden Rules

1) Strive for Consistency - The web application meets this requirement with consistency through various UI designs. The pages that require users to provide their feedback based on their order is similar for every user that logins to this web application. The pages that require users and organizers to login is also consistent. The consistency in formatting reduces any ambiguity for the user trying to navigate the feedback form.

2) Enable Frequent Users to Use Shortcuts – The web application consists of a toolbar that allows the admin and organizers to jump to pages they would require to work on.

3) Offer Informative Feedback – This web app displays this rule by providing a confirmation alert for successful submission for organizations applying.

4) Design Dialogs to Yield Closure – The requirement is met because the input is straightforward and accurately display what is to be expected. We also provide redirection for confirmation pages whenever a input is provided.

5) Offer Simple Error Handlings – If a user doesn't enter any information in the feedback form field, it wont be submitted to the organization to process since it is blank.

6) Permit Easy Reversal of Actions – Since all the input is listed on a single page, all actions are easily changed during input before submission. We also know that the feedbacks provided by the users are sent to the organizations and admins to modify.

7) Support Internal Locus of Control – The user has full control of the system by creating a free account and providing a feedback based on the food they ordered from a restaurant.

8) Reduce Short – Term Memory Load – Since the primary purpose of the user on the web application is to provide feedback in a single area, there is less memory to use. The details are presented explicitly and concise manner so that the user doesn't find it difficult to navigate through the application.

- Modularity and encapsulation of data to facilitate information hiding and reuse
    - The program uses modularity for each page which performs its own functions and algorithms for the user, organization and administrator. Most of the data in the application is hidden from the user to avoid ambiguity of navigation from one page to another.
- Elegance and efficiency of the algorithms
    - The algorithms implemented enable the application to run smoothly without any lag and meets the functionality of the project.
- Appropriateness of data structures used for the problem
    - The web application uses a stack where it stores the recent feedbacks from user in a queue(FIFO). If the stack is full, the oldest feedback is removed and the new feedbacks can be added to the stack.

- Full pathname to the project on the VM:
  `/home/student1/csc415-ind-project`

- Private project repository on `Github`.
  `nairp2/webapp`