Thendral Prabu

Assignment 2-B: Proposal and Specifications

CSC 415-02

Server Name: student1@csc415-server42.hpc.tcnj.edu
Server Password: swords12
Directory: vm-csc415/assn-two/CCH
GitHub: https://github.com/theprab/CCH

Project Title: Community Collective for Homelessness

The Social Issue

Homeless shelters are either closed or operating at limited capacity, even though the need is greater now more than even ever. To offset the difficulties that shelters are facing in housing a larger homeless population, I wanted to offer local shelters a more direct way to reach out to local organizations and private citizens when asking for support.

How the Project Addresses the Issue

While there are currently ways for people to donate resources to shelters, there is no direct way for shelters to request just what they need and minimize waste, which this app is meant to do. My goal is to simplify how shelters address the needs of the people they are caring for, since most are staffed part-time, have limited storage, and cannot afford to sift through unnecessary donations. Overall, implementing this app would cut down on the staff's administrative duties and on waste from donations.

Which Option and The Rationale

I had an idea for the community to directly help those in need and wanted to do so with Option 2, as it offers a little more flexibility and

decided it would be valuable to design a different project than those that currently existed.
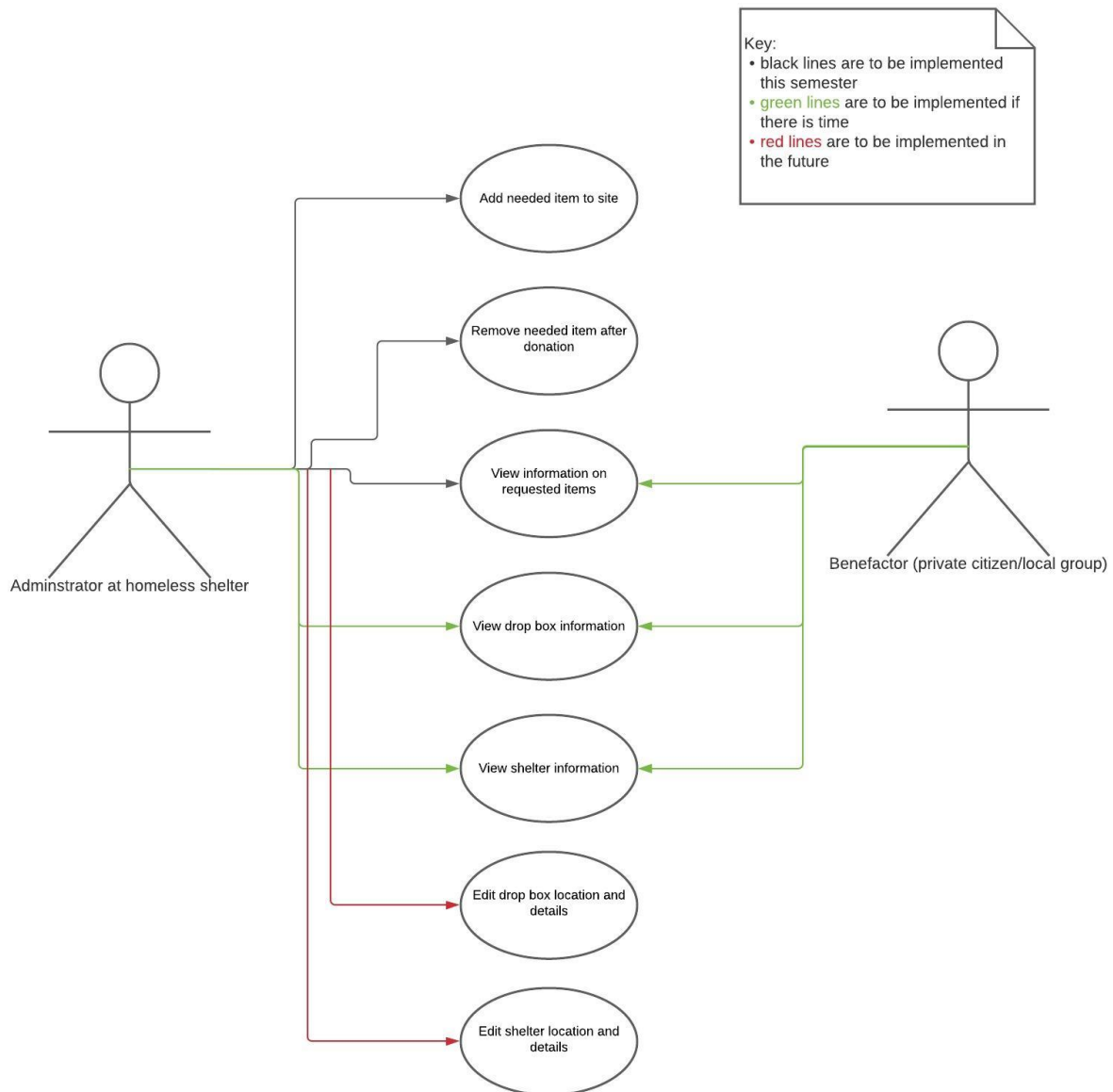
The Algorithm(s) and the Rationale

Administrations at local homeless shelters will be able to enter information about what items they need and how urgently the item is required, all of which will be handled in a database that stores information about the donated and requested items. Administrators will also have access to a database that stores information about drop boxes and shelters that donations can be collected at.

The information for the donated and requested items and their locations will be stored in a PostgreSQL database, as the data and its size is constantly shifting.

New Software Concepts I Expect to Learn/Reinforce

I expect to reinforce my understanding of designing around a user and creating an interface that will allow for easy access to both administrators and those who are donating. To implement and design that interface, I have to fully learn proper UML diagrams to plan out this app. I will also need to refresh myself of the software development cycles that we learned about and how to keep myself on track with those principles so that I am effectively managing this assignment.

Use Case Diagram

Key:
- black lines are to be implemented this semester
- green lines are to be implemented if there is time
- red lines are to be implemented in the future

Add needed item to site

Remove needed item after donation

View information on requested items

View drop box information

View shelter information

Edit drop box location and details

Edit shelter location and details

Adminstrator at homeless shelter

Benefactor (private citizen/local group)

Proposed Timeline

Week 5

- **Assignment 2-B due**
- Complete project proposal
- Get in touch with stakeholders to specify requirements and needs

- Start learning Ruby on Rails through official documentation

Week 6

- Design mock-ups for User Interface
- Complete Use Case Descriptions, Detailed Design Class Diagram. and Statechart

Week 7

- Review UML diagrams
- Work on first prototype. Set up site layout, basic links, and buttons.

Week 8

- **Assignment 2-C due**
- Start implementing databases and other functionality
- Keep track of code functionality created

Week 9

- Check in with stakeholders
- Develop prototype to include more functionality

Week 10

- Develop prototype to include more functionality

Week 11

- Develop prototype to include more functionality

Week 12

- Develop prototype to include more functionality
- Check that the user interface is user friendly
- Meet with stakeholders and potentially demo

Week 13

- **Assignment 2-D**

- **Assignment 2-E**