

Computer Science and Engineering

Pitch'n **System Requirements Specification (SRS)**

Version 1.2

Document Number: SRS-001

Project Team Number: A10

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REVISION LEVEL

Date	Revision Number	Purpose
10/6/20	Version 1.0	Initial Release
10/22/20	Version 1.1	Include sections 6,7, and 8
11/18/20	Version 1.2	Include section 9

TABLE OF CONTENTS

1.	DOCUMENT PURPOSE	1
1.1	PURPOSE	1
2.	INTRODUCTION	1
2.1	SCOPE	1
2.2	IDENTIFICATION	1
2.3	BOUNDS	2
2.4	OBJECTIVES	2
2.5	CONTEXT DIAGRAM	2
2.6	ADDITIONAL DESCRIPTIVE ITEMS	3
3.	GLOSSARY	4
4.	REFERENCE DOCUMENTS	4
5.	BUSINESS REQUIREMENTS	4
5.1	TECHNOLOGY	4
5.2	ECONOMICS	4
5.3	REGULATORY AND LEGAL	4
5.4	MARKET CONSIDERATIONS	4
5.5	RISKS AND ALTERNATIVES	5
5.6	HUMAN RESOURCES AND TRAINING	5
6.	USER REQUIREMENTS (DESCRIPTIVE FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS)	5
6.1	FUNCTIONAL DESCRIPTIVE DETAILED REQUIREMENTS	5
6.2	NON-FUNCTIONAL DESCRIPTIVE DETAILED REQUIREMENTS	5
7.	SYSTEM ARCHITECTURE	6
8.	DETAILED SYSTEM REQUIREMENTS - USE CASES	6
8.1	REQUIREMENT USE CASES	6
9.	SYSTEM MODEL(UML)	9
9.1	STATIC – CLASS DIAGRAMS.....	9
9.2	DYNAMIC – BEHAVIORAL MODELS.....	11
10.	EVOLUTION OF THE SRS	13
11.	RATIONALE	13
12.	NOTES	13
13.	APPENDICES	14
13.1	SYSTEM TEST PLAN REQUIREMENT	14
13.2	QUALIFICATION PROVISIONS	14
13.3	REQUIREMENTS TRACEABILITY	15
13.4	SCHEDULE TRACKING	15
13.5	DEFECT TRACKING	16
13.6	DICTIONARIES.....	17
14.	INDEX.....	19

1. DOCUMENT PURPOSE

1.1 Purpose

The purpose of this software requirements document is to clearly define the system under development, namely the Pitch'n system. The intended audience of this document includes the users who are looking to donate items and donation centers who are looking to receive items. Other intended audience includes the development team such as the requirements team, requirements analyst, design team, and other members of the developing organization.

2. INTRODUCTION

The Pitch'n system will include an application that tells the user where to donate and what is needed to be donated. Donation Centers will be able to state what they want to be donated, their location and other company information.

Other applications allow the user to donate money to the donation center/charity, while Pitch'n also lets the users know what else they can donate to help.

2.1 Scope

The owner of a local shelter wanted to create an online medium for users to be able to see what things shelters need and accept, their operating hours, and their location. Therefore, the Pitch'n system will include the following functionality: information on donation centers, and a system for donors to access this information. Pitch'n is intended to make donating easy and fun, and make the jobs for the centers a bit easier.

2.2 Identification

Pitch'n System Requirements Specification, SRS-001, Version 1.1

2.3 Bounds

The donators use Pitch'n to get general information about Donation Centers near them, and to see what they need to be donated. While the Donation centers upload their general information and what they need, and find out who is donating what.

2.4 Objectives

Our project priority includes identifying the donation centers and providing those locations to nearby users who want to donate items. The life cycle of our project will be evolutionary as we will continue to develop and update our application with ongoing user feedback.

Software Requirement and Analysis Specification (SRS-Requirements): October 20, 2020

Software Project Management Plan (SPMP): November 5, 2020

Software Analysis Specification - Final (SRS - Analysis): November 17, 2020

Project Presentation: December 10, 2020

2.5 Context Diagram



2.6 Additional Descriptive Items

- a. Product functions:
 - A maps system to track user's location, and store and display nearby centers to them
 - Profile system to display each center's information such as items they accept and hours of operation.
 - Contact system to let users contact the centers directly.
- b. User Characteristics
 - Knowledge about GPS services so they can successfully locate the centers.
 - Experience with donating
 - Technical knowledge about applications
- c. Constraints
 - Will have to request access to users' location. However, not all users would want to share their location.
 - All locations and information need to be correct
 - Need to ensure all directions are safe
 - Software needs to be accessible on all devices
 - Friendly and easy to use interface
 - Centers need to give developers permissions for their information to be displayed
- d. Assumptions and dependencies – list each of the factors that affect the requirements. These factors are not design constraints; rather, any changes to them that can affect the requirements. (For example, the specification of a specific operating system on a particular hardware platform. If the OS or hardware were not available, the requirements would have to be modified)
 - If users disable their location services, the search results would have to be modified.
 -
- e. Requirements subsets – For iterative development, identify requirements subsets and those requirements subsets that could be delayed until future releases.
 - A chat feature for users to directly contact the centers through Pitch'n(could be delayed until future release).

- Provide a means to transport the items from users to the centers (could be delayed until future release).

3. GLOSSARY

Donators:

Users who are donating to the Donation Centers

Donation Centers:

Clients who want to make known of what they need to be donated

4. REFERENCE DOCUMENTS

[Project Proposal](#)

A10; Project Team Proposal; 01; Version-01; September 21, 2020

5. BUSINESS REQUIREMENTS

5.1 Technology

None

5.2 Economics

Helping Donation Centers receive items they need to give the needy. This has the chance to help those in need get their lives back in order and get jobs.

5.3 Regulatory and Legal

None

5.4 Market Considerations

Donation Centers

5.5 Risks and Alternatives

If there is some kind of natural disaster (i.e. Hurricane, Tornado, Blizzard, Pandemic. etc.) that restricts people from going outside then they cannot go to Donation Centers to donate items. As of now no alternative is found to resolve this issue.

5.6 Human Resources and Training

None

6. USER REQUIREMENTS (DESCRIPTIVE FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS)

6.1 Functional Descriptive Detailed Requirements

Pitch'n system shall be able to locate donation centers within 10 miles of the user's location when the application is opened.

A user shall be able to bookmark any donation center that is shown.

A user will be able to bookmark items from a certain donation center.

The Pitch'n system shall connect to the Google Maps API.

6.2 Non-Functional Descriptive Detailed Requirements

No false information is displayed for any center, thus when the demand for items change that information shall be updated

The center's information should be displayed in 0.5 secs

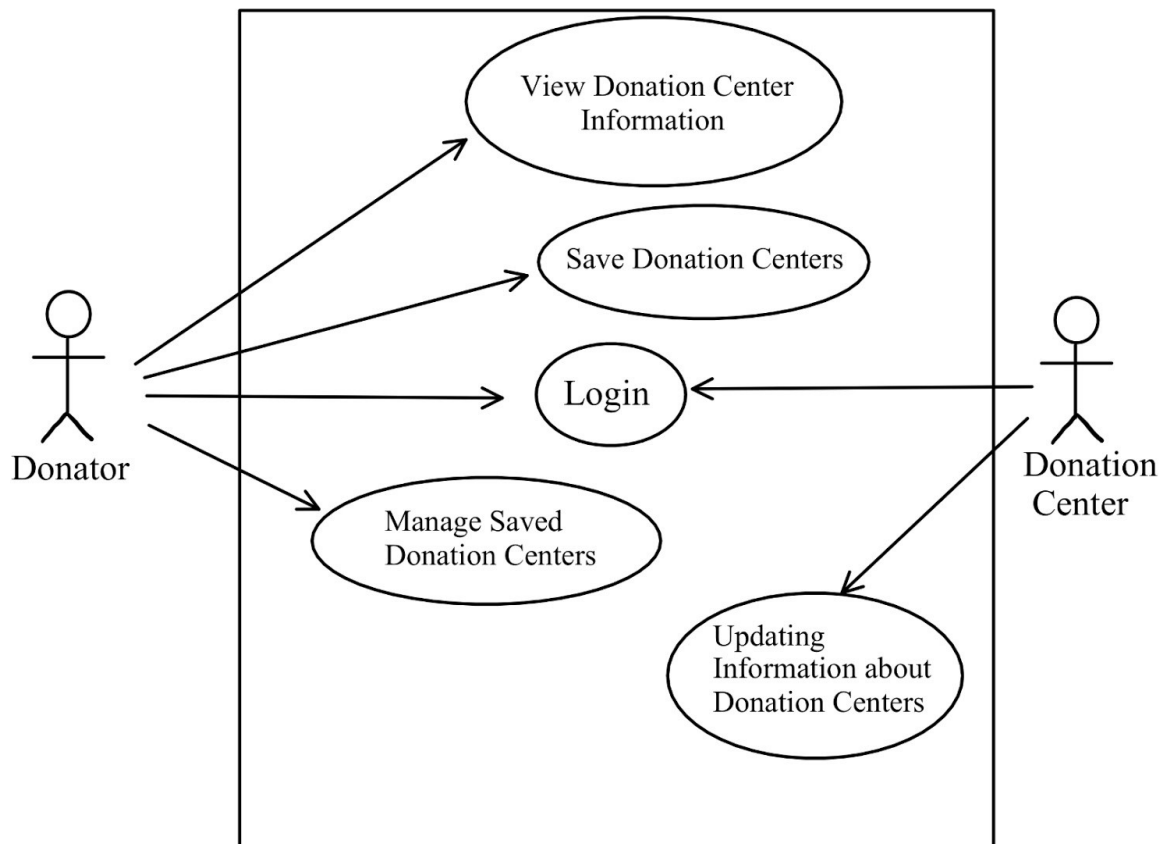
7. SYSTEM ARCHITECTURE

Pitch'n will use the Google Maps Platform for our donators to know where the centers are and display the centers information when that center is pressed upon.

8. DETAILED SYSTEM REQUIREMENTS - USE CASES

8.1 Requirement Use Cases

8.1.1 Use Case Diagrams



8.1.2 Use Case Descriptions

View Donation Center Information		
Description	The user selects a donation center on the map	
Pre-Conditions	The user accepts permissions to access their location information	
Flows	Basic or Normal Flows	1. The system provides the database information on the selected location
	Alternative Flows	None
Post Conditions	The user is on the donation center information page	
Special Requirements	Must already have a donator account	
Extension Points	None	

Save Donation Center		
Description	The user clicks on the star	
Pre-Conditions	The user has accessed the view donation center information	
Flows	Basic or Normal Flows	1. The system asks the user to confirm their choice 2. The user confirms
	Alternative Flows	None
Post Conditions	The database is updated	
Special Requirements	None	
Extension Points	None	

Manage Saved Donation Centers		
Description	The user can access saved information about Centers.	
Pre-Conditions	The user selects the <i>Favorites</i> link	
Flows	Basic or Normal Flows	1. The system presents an alphabetical list of saved locations
	Alternative Flows	In step 1, the user can choose to delete saved donation centers by clicking on the star or view the donation center information.
Post Conditions	The database is updated	
Special Requirements	Must already have a donator account	
Extension Points	None	

Inputting Updating Information about Donation Center		
Description	The user selects a <i>Edit Information</i> link	
Pre-Conditions	The user is on the page that displays their center information	
Flows	Basic or Normal Flows	<ol style="list-style-type: none"> 1. The system shows the current information on the database regarding the center 2. The user selects the button at the bottom of the page to update their information 3. The system presents the database information in grid form for modification 4. The user updates the information and submits the form 5. The system checks that the required fields are not blank

	Alternative Flows	In step 5, if any required field is blank, the user is instructed to add an entry. No validation for correctness is made.
Post Conditions	The database has been updated	
Special Requirements	Must have a Donation Center Account	
Extension Points	None	

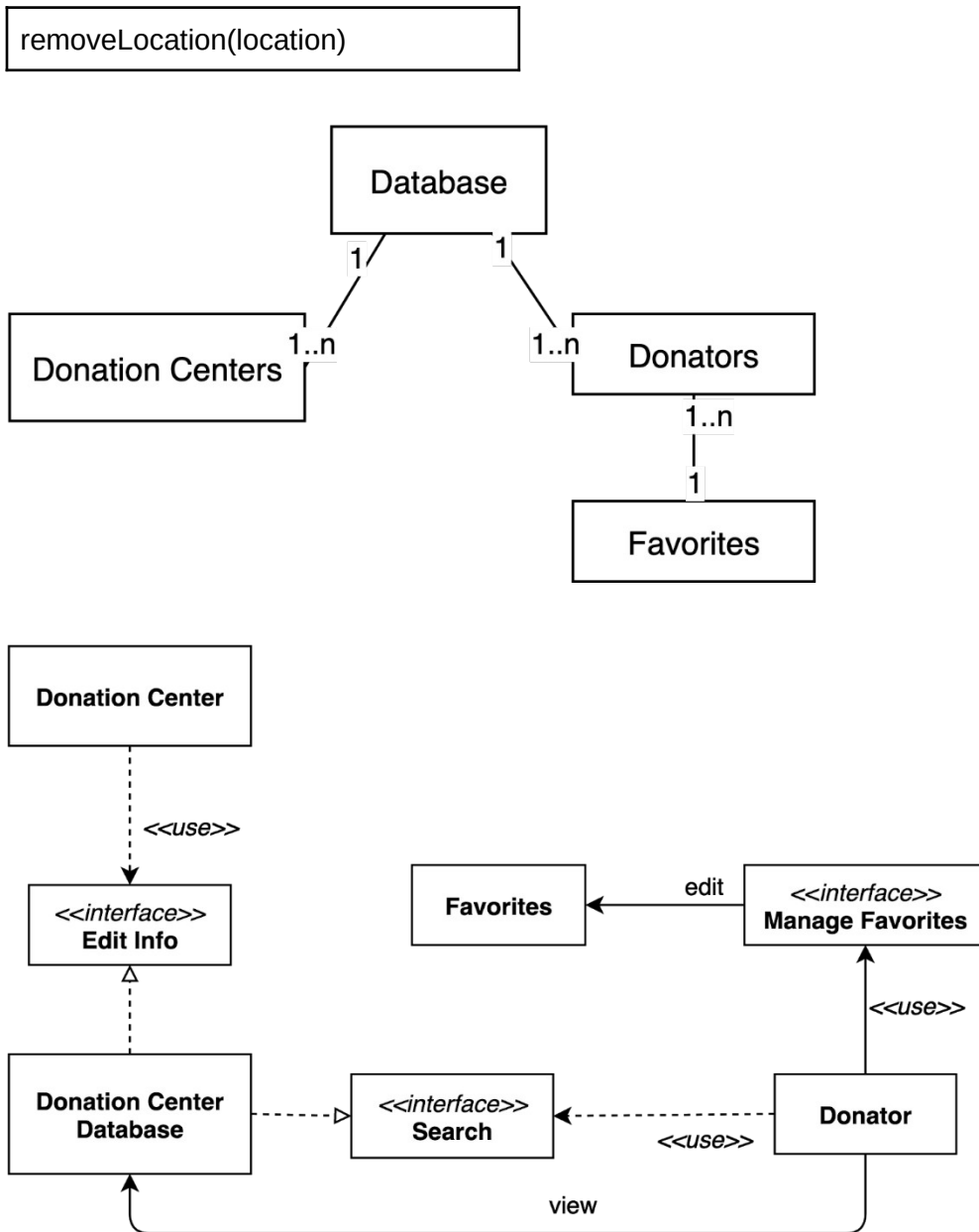
9. SYSTEM MODEL (UML)

9.1 Static - Class Diagrams

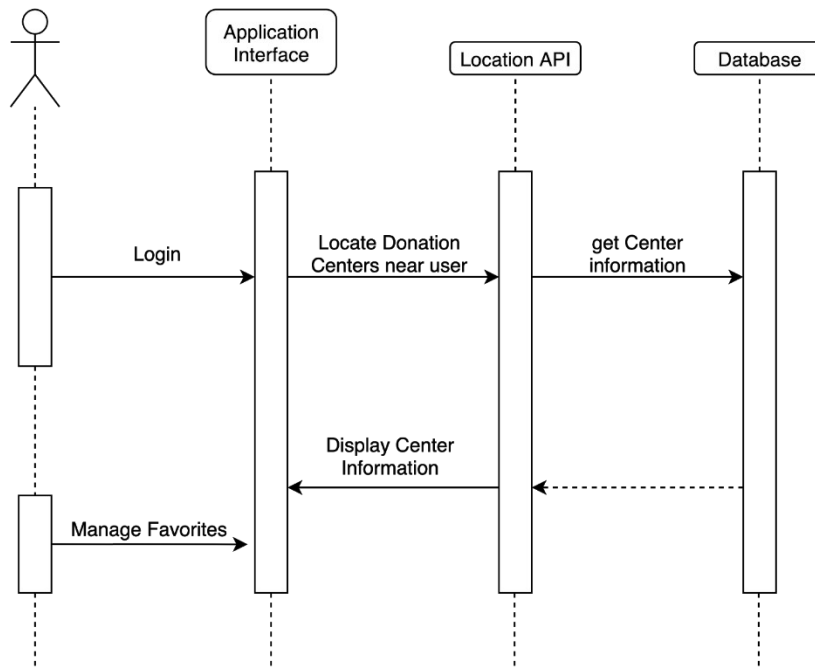
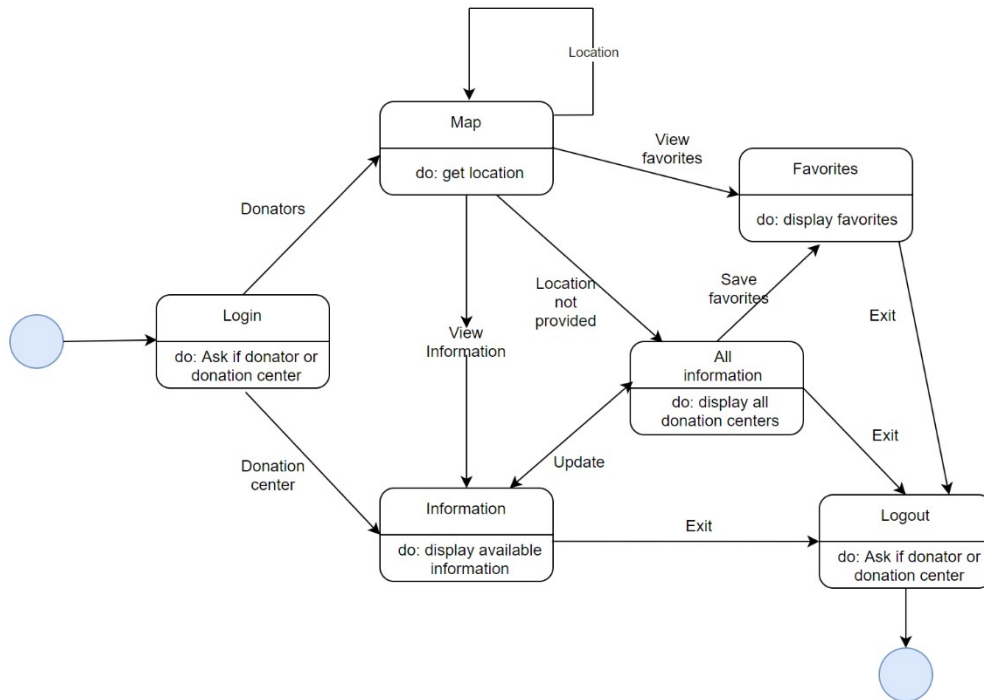
Donator
Id Location
saveLocation(location)

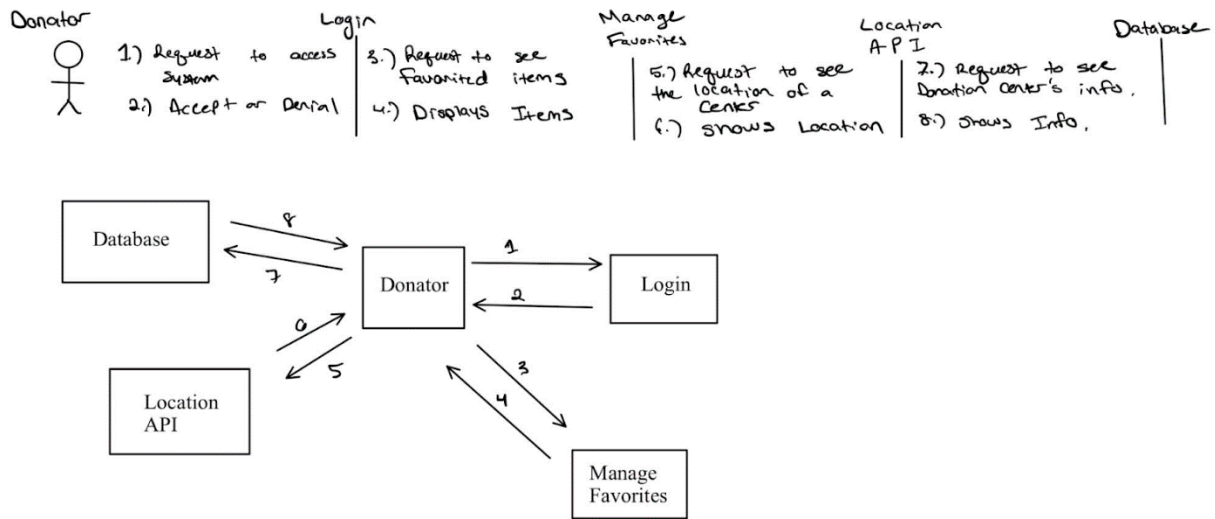
Donation Center
Name Address DesiredItems OpenTimes
editInfo()

Favorites
savedLocations, type = list of pointers
addLocation(location)



9.2 Dynamic - Behavioral Models





10. EVOLUTION OF THE SRS

As of now the SRS shows the initial plans for Pitch'n. As time progresses, and deliverables are made the SRS will be revised as needed. This includes information that states where Pitch'n is now, what needs to be done, and whether any expectancies occurred.

11. RATIONALE

None

12. NOTES

None

13. APPENDICES

13.1 System Test Plan Requirements

We will initially be testing each individual section of the application. Beginning with the identification of donation centers in a location near a user, we will be using random locations to simulate users. The software should be able to locate nearby donation centers such as homeless shelters, soup kitchens, etc. without identifying other locations. Subsequent testing will include the ease with which the user can navigate the interface by having testers try out the software and locate any errors. Once the product is released, we will be referring to reviews and ratings of the application made by users in order to direct any future development.

13.2 Qualification Provisions

Pitch'n will be qualified through formal validation tests of the SRS level requirements. The Qualification Methods applied to the software shall include test, peer review, walk-through, and inspection.

1. TEST (SELF-CHECK)
 - i. A qualification method that is carried out by operation of the system and that relies on the collection and subsequent examination of data
2. PEER REVIEW
 - i. A qualification method that is carried out by operation of the system, and that relies on observable functional operation not requiring the use of elaborate instrumentation or special test equipment.
3. WALK-THROUGH
 - i. A semi formal qualification method that is carried out by the processing of accumulated data. An example of accumulated data is the compilation of data obtained from other qualification methods. Examples of the processing of accumulated data are interpretations or extrapolations made from the data.

4. INSPECTION

- i. A formal qualification method that is carried out by visual examination, physical manipulation, or measurement to verify that the requirements have been satisfied.

13.3 Requirements Traceability

Every requirement has a unique number which is traceable from the requirements to the analysis to the design. Reverse traceability also applies as one can take a requirement found in the code and trace it back to the actual requirement that came from it.

13.4 Schedule Tracking

Artifact or Deliverable	Who (individual or Team)	Estimated	Actual	Difference
Initial SRS	Avik Gomes, Tanya Jain, Crystal Song	4 hours	2.5 hours	1.5 hours
SRS-Requirements	Avik Gomes, Tanya Jain, Crystal Song	2.5 hours	1.5 hours	1 hour
SRS-Analysis	Avik Gomes, Tanya Jain, Crystal Song	2 hours	1.5 hours	.5 hours

Artifact or Deliverable	Who (individual or Team)	Estimated	Actual	Difference
Final SRS				

Cumulative

Who (individual or Team)	Estimated	Actual	Difference
Avik Gomes, Tanya Jain, Crystal Song	8.5 hours	5.5 hours	3 hours

13.5 Defect Tracking

Artifact or Deliverable	Who (individual or Team)	Estimated	Actual	Difference
Initial SRS	Crystal Song, Avik Gomes, Tanya Jain	3	3	0
SRS-Requirements	Crystal Song, Avik Gomes, Tanya Jain	3	2	1
SRS-Analysis	Crystal Song, Avik Gomes, Tanya Jain	0	0	0

Artifact or Deliverable	Who (individual or Team)	Estimated	Actual	Difference
Final SRS				

Cumulative

Who (individual or Team)	Estimated	Actual	Difference

13.6 Dictionaries

Class

Name	Description	Methods	Attributes
Donator	Users who are donating to the Donation Centers.	Login Give Location Save Favorites	
Donation Centers	Clients who want to make known of what they accept.	Login Edit Info	Database
Favorites	Users can store their favorite donation centers under favorites	Review	SavedLocations

Methods

Name	Description	Class	Arguments
Login()	Used to enter the system	Donator and Donation Centers	Username Password
Give Location()	Used to get the donators location to display centers near them	Donator	Location
Save Favorites()	Can be used by donors to save their favorite centers	Donator	Donation Center
Edit Info()	Used by donation centers to edit their information	Donation Centers	New Info
Review()	Used to leave comments/ratings for the donation centers.	Favorites	Comments

Attributes

Name	Description	C/S	Size	R/W
SavedLocations	A list of saved donation centers	Simple	A subset of the database. Small in size	R and W for donators
Database	A list of all donation	Complex	Large	R for donators

	centers			R and W for donation centers
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Relationship

Name	Description	From Class	To class	Cardinality
View info	Donators view the info posted by donation centers.	Donators	Donation Centers	

Key Events

Name	Description	Motive	Action	Pre conditions	Post conditions	State change
Selecting favorites	Donators save centers as favorites	Easy access	Saving a center as favorite	Donators check out a center and they like it	They can quickly access the center as it is a favorite.	Non-favorite to favorite

14. INDEX

A

APPENDICES, 6

B

BUSINESS REQUIREMENTS, 4

D

DOCUMENT PURPOSE, 1

Donate, 1, 2, 5

Donation Centers, 1, 2, 4, 5

E

EVOLUTION OF THE SRS, 5

G

GLOSSARY, 4

I

INTRODUCTION, 1

N

NOTES, 6

P

Pitch'n, 1, 2, 4, 5, 7

R

RATIONALE, 6

REFERENCE DOCUMENTS, 4