Requirements and Use Cases

FLOAT

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Motivation/Opportunity

Float will be an Android application where users can share personal stories and photos with the goal of raising awareness and donations for a selected charity. Unlike other social media applications, Float is centered around spreading images and stories to promote charitable causes.

Problem Statement

The problem of	With the current available resources, online methods of donation are disconnected and provide little connection to others and the charity itself. Donations made by a person are often individual and relatively non-interactive, forcing people to donate without a feeling of unity or end goal.
Affects	Those who are interested in donating to charity organizations, those who receive assistance from charity organizations and charity organizations themselves.
The impact of which is	People feel a disconnect between themselves and charities, thus making them less motivated to donate
A successful solution would be	Providing a platform that allows users to connect with other people and charity organizations. Usage of the platform would allow people to band together and work towards the same end goal, providing a feeling of teamwork and group unity. This serves to make charity donations interactive, collaborative and an ultimately rewarding experience.

Product Position Statement

For	Android users, Charity organizations
Who	Wish to promote charity donations and share stories and pictures
Our System	Is an Android application utilizing an online server, Firebase, Facebook API, Google Map API, and the location services API
That	Allows users to upload personal images which other users can pass on, with the goal of an image spreading across regions to raise awareness and donations for selected charity campaigns
Unlike	Snapchat, instagram, gofundme, twitter, facebook

Our Product	Combines the idea of image sharing with crowdfunding and is focused on the idea of using social media to benefit others in a fun and interesting way

User Demographic

Users of Float will fall into one category: Application Users who wish to support and donate to charities, while also sharing a picture and optional story.

Application User:

Their primary goal for the software is to raise money for charities that matter to them, while also spreading personal pictures/stories.

Feature List:

Create a campaign - Upload an image and write a description - Choose a charity - Choose the destination for the campaign	Users can create their own campaigns by following the listed steps - Our application allows users to select an image from their phone and upload it. The user can then write a description for their image - The user can browse through the valid charity organizations, choosing one to support - The user also choose the destination for of their campaign as well as the amount of money they want to pledge
Search for campaigns in your location	Users can browse all campaigns via list view or map view that have not expired and appear within their radius of view
Spread a campaign	A user can pass on a campaign within their current location radius and allow other users within the radius to view the campaign
Donate to a campaign/charity	A user can donate money to any campaigns that they see

Feature List: Where charities can register themselves into our system

Charity selection	The charities available to the app will be manually chosen added by administrators, in order to ensure authenticity and reduce the chances of fraud.

Upload charity icon	The icons will be in sync with the charity's official icon. However, charities may submit alternate icons if they desire.
Enter charity organization info	The charity can submit information regarding itself to discuss their cause, the use of donations, and its scope
Upload payment details	The charity can submit their Paypal details for receiving donations.

Constraints on each system

Payment	Payment methods are limited. User can only pay with credit cards and Paypal.
Android Scope	Android has only a fraction of the smartphone market.
Information Storage	The application may not be able to store large volumes of information, as there are limited online database options within our price range.

Assumptions and Dependencies

This project depends on the Google API, Firebase, PayPal, FaceBook APIs, user permissions, the user having the necessary smartphone peripherals.

Regarding the Google API, we assume that:
- It is capable of mapping locations specified in coordinates or as an address.

Regarding the database server, we assume that:
- Firebase prevents stalemates and unpredictable behaviour due to data race conditions.
- It can store large amounts of pictures and text.

Regarding PayPal (and other payment APIs), we assume that:
- It is cryptographically secure.
- It can process payments through the smartphone.
- It can delay payments in the event that campaign does not reach its final destination.

Regarding the Facebook API, we assume that:
- It provides a means to sign in a user through their social network account into the Float project.
- It allows us to access specific portions of the user's information and friend's list.
- It is secure.

Regarding user permissions, we assume that:

- The user allows the app to access to the images, GPS, internet (through wifi or data), and camera.

Regarding smartphone peripherals, we assume that:
- The smartphone is capable of using the GPS, connecting to the internet, and taking pictures.

Use cases

Use Case #1	
Goal	User opens the application and tries to log in
Primary actor	General user
Precondition	User has an account
Success end	User successfully log in
Failure and condition	User can not log in
Main success scenario	1. The user taps the application icon on their phone 2. The application opens 3. The user is prompted to login using Facebook 4. Upon successful login, the user is redirected to another page

Extension(Error scenario)	1. User does not have an account in the database
	   a. The user is redirected to another page
	   b. The user fill in necessary information to create an new account

Use Case #2	
Goal	User creates a campaign
Primary actor	General User
Precondition	User has successfully logged in
Success end	An new campaign is successfully created
Failure and condition	Fail to create an new campaign
Main success scenario	1. The application user enters a title for their campaign.

	2. The application user chooses a charity for their campaign.
	3. The application user uploads an image from their device as the campaign image.
	4. The application user writes a description for the chosen image.
	5. The application user enters the amount they will pledge in the case the campaign succeeds
	6. The application user enters in a goal destination.
	7. The application user writes a short description regarding the goal destination
	8. The user taps a button to launch the campaign
Extension(Error scenario)	1. New campaign information has conflict with existing campaign a. User is prompted for filling new information

Use Case #3	
Goal	Application user spreads a campaign
Primary actor	General user
Precondition	User has successfully logged in and selected a nearby campaign
Success end	The campaign selected is successfully spread to the user's current location
Failure and condition	Fail to spread the campaign
Main success scenario	1. While on the campaign details page, the user can choose one of three options: spread the campaign without donating, donate and spread the campaign, or return to the map. The user clicks on either the "spread" button, or "spread and donate" button. 2. The user is redirected to a separate interface where he/she can complete the process of spreading to a campaign or spreading and donating to a campaign. 3. The user is returned to the map homepage, where the user's circle is visible on selecting the campaign on the map again.

Use Case #4	
Goal	Application user updates their account details
Primary actor	General user
Precondition	User has an account and has successfully logged in
Success end	User information is updated
Failure and condition	Fail to update user's information
Main success scenario	1. The user clicks on the "Account Details" button on the application 2. The user modify aspects of their account, including: username, password, profile picture and description. 3. The most up-to-date information about the user's account will be stored

Use Case #5	
Goal	User clicks on a campaign point on the map
Primary actor	General user
Precondition	The user has successfully logged in and is viewing the map page
Success end	A pop-up box that indicates the campaign's information appears
Failure and condition	Pop-up box or information of the campaign is not shown properly
Main success scenario	1. The user opens the application and is brought to the map view which includes campaigns within their radius 2. The user taps on a marker that triggers up a pop-up box. 3. A pop-up box containing information for that campaign appear

Use Case #6	
Goal	The user logs out and quits the application
Primary actor	General user
Precondition	User is successfully logged and using the app
Success end	User successfully log out and the app is closed properly
Failure and condition	User fails to logout and app is not closed properly
Main success scenario	1. User navigate to the logout page 2. User tap the logout button 3. User logout the application 4. User quit the application
Extension(Error scenario)	1. User quit application without logging out a. The connection will remain and the user does not need to log in if he/she re-open the application

Use Case #7	
Goal	User opens the application and try to log in
Primary actor	General user
Precondition	User has an account
Success end	User successfully log in
Failure and condition	User can not log in
Main success scenario	The user taps the application icon on their phone The application opens The user is prompted to login using Facebook Upon successful login, the user is redirected to another page

Extension(Error scenario)	1. User does not have an account in the database
	   a. The user is redirected to another page
	   b. The user fill in necessary information to create an new account

Use Case #8	
Goal	User donates to a campaign/charity using PayPal
Primary actor	General user
Precondition	User has successfully log in and is on the campaign details page
Success end	Money is transferred from the user to charity via paypal, the total amount donated for the campaign is updated and the radius of the campaign has been spread to the users location.
Failure and condition	The user is unable to donate money
Main success scenario	1. The user is in the campaign's detail page. They click the donate icon and are brought to a separate page to complete the transaction 2. In this page, they are prompted for the amount of money they would like to donate, as well as their payment information through paypal. User can donate through an existing paypal account or credit card. 3. The payment is deemed as accepted or declined. If the payment is accepted, a receipt is saved in the user's profile and the user is returned to the campaign's home page. If the payment is declined, the user is given the option to try again or to cancel the transaction.
Extension(Error scenario)	1. The user does not have sufficient funding, or their PayPal account does not have the means to donate. 2. The user is redirected to a page that displays the failed payment status 3. They are given the option to return to the map page, or try donating again

Use Case #9	
Goal	The user switches from a map-view to list-view of the campaigns
Primary actor	General user

Precondition	The user is on the main page of the application in map view and has pressed the list view button
Success end	The user interface of the application changes from a map-based view of all the campaigns in a user's area to a list-based view of all the campaigns in a user's area
Failure and condition	The user is not able to view the campaigns in list format
Main success scenario	1. The interface changes from a map-view of all the campaigns in the area into a list-view of all the campaigns in the area 2. The user can scroll through the campaigns in their area. Each campaign entry displays the picture, and the campaign creator's username and icon, the charity's name and logo.