

Requirements and Use Cases

Team
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 force 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 and database and location 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 two categories: Application Users and Charity organizations.

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 <ul style="list-style-type: none"> - Upload an image and write a description - Choose a charity - Choose the goal distance for the campaign 	Users can create their own campaigns by following the listed steps <ul style="list-style-type: none"> - Our application must allow 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 before choosing one to support - The user also choose the distance goal 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

Comment on a campaign	Users can leave comments/feedback in the comments section of each of the campaigns
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Feature List: Where charities can register themselves into our system

Charity selection	The charities available to the app will be manually selected 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.

Upon sending this data, administrators will create the charity into the database.

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:** Application user creates a campaign

1.1 The application user enters a title for their campaign.

1.2 The application user chooses a charity for their campaign.

1.3 The application user uploads an image from their device as the campaign image.

1.4 The application user writes a description for the chosen image.

1.5 The application user enters the amount they will pledge in the case the campaign succeeds

1.6 The application user enters in a goal destination.

1.7 The application user writes a short description regarding the goal destination.

Preconditions:

1.1 The user has images in their picture library.

1.2 The user has location services enabled.

1.3 The user has an account in the application.

1.4 The user enters in a valid pledge amount.

Postconditions

1.1 The selected image will show up on on the campaign details page, which can be viewed by other users within the upload radius.

1.2 The written description will show up on the campaign details page.

1.3 The charity's logo appears on the campaign details page.

1.4 The campaign's goal destination and pledge amount will be visible on the campaign details page.

Main Success Scenario

1.1 The user indicates they would like to upload an image. They select one from their gallery. It appears on the returning screen with the campaign creation page.

- 1.2 The user enters in text below the image.
- 1.3 The user selects a charity from a drop down menu.
- 1.4 The user selects a text box and enters the location he/she wants the campaign to travel to. If the location is invalid, the user is prompted for a different location. The user enters a currency amount. He/she taps a button to save the campaign.
- 1.5 The user taps a button to launch the campaign.

Use Case 2: Application user spreads a campaign

- 2.1 The user chooses if they wish to spread the chosen campaign.

Preconditions:

- 2.1 The user has his/her location visible to the app.
- 2.2 The user has selected the campaign that they are interested in

Postconditions:

- 2.1 Once spread by the user, the campaign becomes visible to others within the user's radius

Main Success Scenario

- 2.1 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.
- 2.2 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.
- 2.3 Upon successful completion of 2.2, 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 3: Application user updates their account details

- 3.1 The user clicks on the "Account Details" button on the application
- 3.2 The user is able to modify aspects of their account, including: username, password, profile picture and description.

Precondition

- 3.1 The user has an existing, valid account and is logged in.

Postcondition

- 3.1 Any modifications the user has made is saved in the database.
- 3.2 Updated information is shown on the user's profile.

Main success scenario:

- 3.1 The user navigates to the user account page.
- 3.2 The page will contain the most up-to-date information about the user's account. The displayed information includes: the campaigns the user has contributed to, campaigns they have started, the total amount of money they have donated and to which charities, and the option to change their information or delete their account.

Use Case 4: User clicks on a campaign point on the map

- 4.1 The user opens the application and is brought to the map view which includes campaigns within their radius.
- 4.2 The user clicks on a visible marker(campaign) on the map.

Precondition:

- 4.1 The user is viewing the map page.

4.2 The markers on the map indicate campaigns.

Postcondition:

4.1 A pop-up box that indicates the campaign's title, photo, creator and associated charity appears. The user can choose to view the campaign in more detail through the pop-up box by clicking on the "more details" button.

4.2 Upon clicking the "more details" button on the pop-up, The user is brought to a new page containing the campaign title, picture, goal destination, initiating user and description.

Main success scenario:

4.1 The user taps on a marker that triggers up a pop-up box.

4.2 Upon viewing the pop-up box, clicking the "more details" button brings the user to a new page.

Use Case 5: User opens the application for the first time and creates an account

5.1 The user clicks the FB login button

5.2 The user enters the necessary information to create an account. The necessary information includes: a username and a password.

5.3 The user click the save button to create a account

Precondition:

5.1 The user has the application successfully installed on their Android phone.

5.2 The user has a valid Facebook account.

Postcondition:

5.1 The user is logged in with a newly created account.

Main success scenario:

5.1 The user taps the application icon on their phone

5.2 The application opens

5.3 The user is prompted to login using Facebook

5.4 Upon successful login, the user is redirected to a page for creating a Float account.

5.5 The user enters his/her new Float username and new password.

5.6 The user is given the opportunity to upload a profile picture and description.

Use Case 6: The user logs out and quits the application

6.1 The user taps the "Account Details" button.

6.2 The user taps the logout button of the application.

Precondition:

6.1 The user is already logged in the application.

Postcondition

6.1 The application has been closed successfully.

6.2 The user is logged out of their facebook account.

6.3 When the user opens the application again, they must log back into their account through Facebook.

Main success scenario:

6.1 The user logs out of the application on their phone.

6.2 The application will save any changes to the user's account before the application is closed.

Use Case 7: User donates to a campaign through PayPal

7.1 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

Precondition:

7.1 The user has navigated to their chosen campaign and

Postcondition:

7.1 Money is transferred from the user to charity via paypal

7.2 The total amount donated for the campaign is updated

7.3 The radius of the campaign has been spread to the users location

Main success scenario:

7.1 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.

7.2 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.

Use Case 8: The user switches from a map-view to list-view of the campaigns

Precondition:

8.1 The user is on the main page of the application in map view

8.2 The user presses the list view button

Postcondition:

8.1 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

Main success scenario:

8.1 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

8.2 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.