



Plant Swap App

SYNOPSIS - ITSMAP Spring 2020

Group 6

Group Members

Valeria Polukhina Wellejus	au547175	IKT
Niclas Spas	au309804	IKT
Trí Nguyen	au564065	IKT
Martin An Vo	au569472	E



Document version: 1.0



App Vision

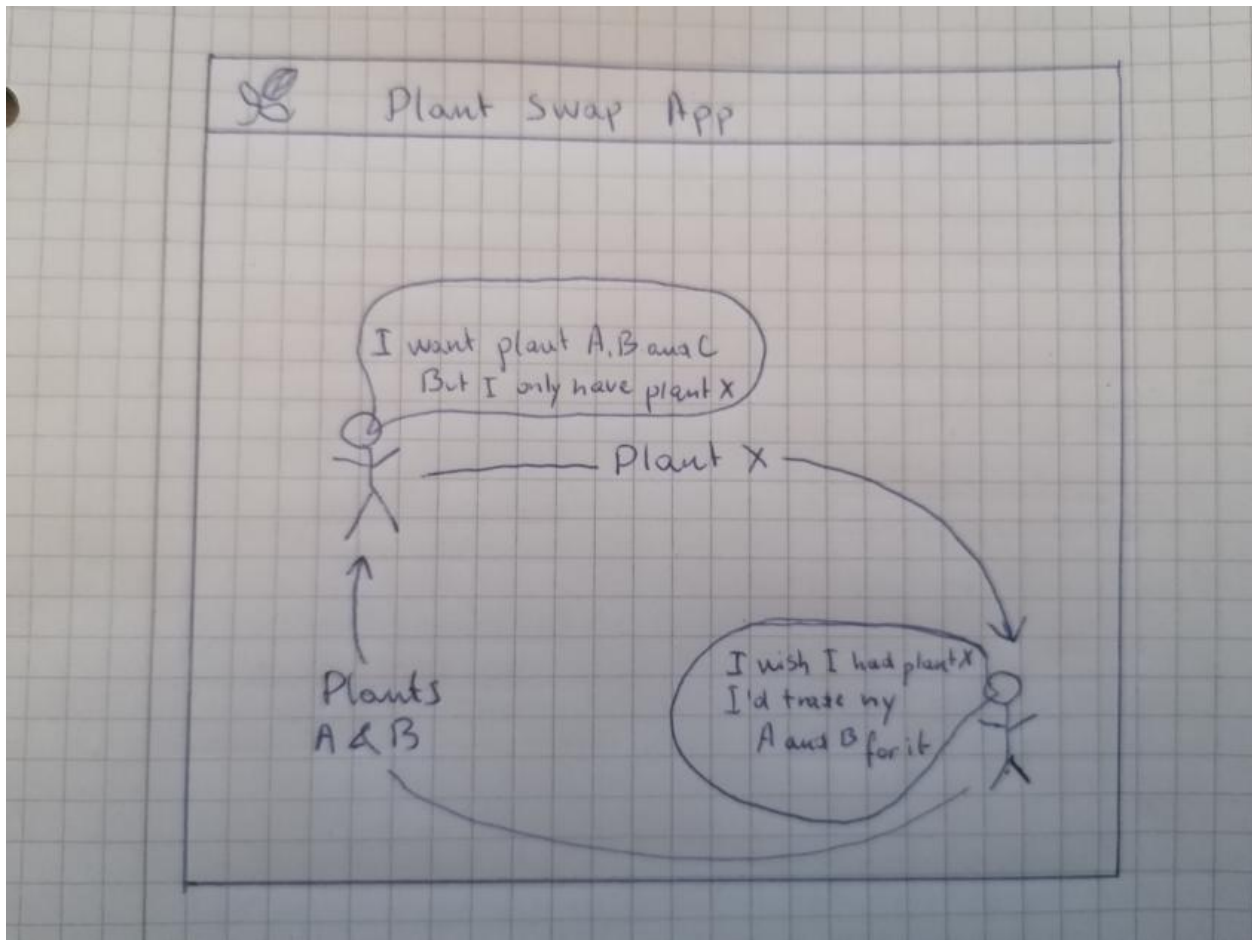
The app has a purpose of making it easier for plant collectors to swap plants. Often when selling, buying or trading plants it can be a pain to negotiate a fair swap for both parties and then exchange personal information so the plants can be sent. With this app collectors won't have to talk to each other or negotiate, they will simply make a wish list when putting something up for swap. If a plant from the wishlist has popped up within a given distance, the user will receive a notification. The user can then see the add and offer a plant from the wishlist for swaps. The other part can decline or accept the proposal. There's also no need to exchange information as it is already in the system.

Personal Vision

As a group we wish to learn the aspects of the course that we have not yet used in our previous assignments. That includes Firebase for data storage and location sensors for finding an item with a specific range. We would also like to create a product that will potentially be used by others. Plants are just an example of trade items; it is possible to expand the app with other kinds of items or add payment options to the designed app to broaden the functionality.

Context

The app is intended as a multi-user app, where users can trade plants with each other. The 'available' plants would be fetched from the API <https://trefle.io/>. This will only give users specific plants to choose from and although it hinders the options it also hinders the users from writing gibberish and make spelling errors as one will see on Facebook's Marketplace. It will integrate with Firebase for data storage and use permissions to access phone's camera, gallery and location. When a plant is put for swaps it will be added to the database and if the name will match another user's wishlist choice and the location is within the specified range a user will get a notification about their dream plant being available near them.



Rich picture showing the core functionality

Requirements

User stories

1. As a user I can register with my contact information
2. As a user I can get a notification whenever an interesting item is within a specified range
3. As a user I can edit my notification settings (broaden or shorten range for a plant or add a new plant)
4. As a user I can put a plant for swap
5. As a user I can add, change or delete a plant from my swap list
6. As a user I can either accept or decline a swap proposal
7. As a user I can propose to swap plants I get notified about
8. As a user I cannot involve the money in the deal



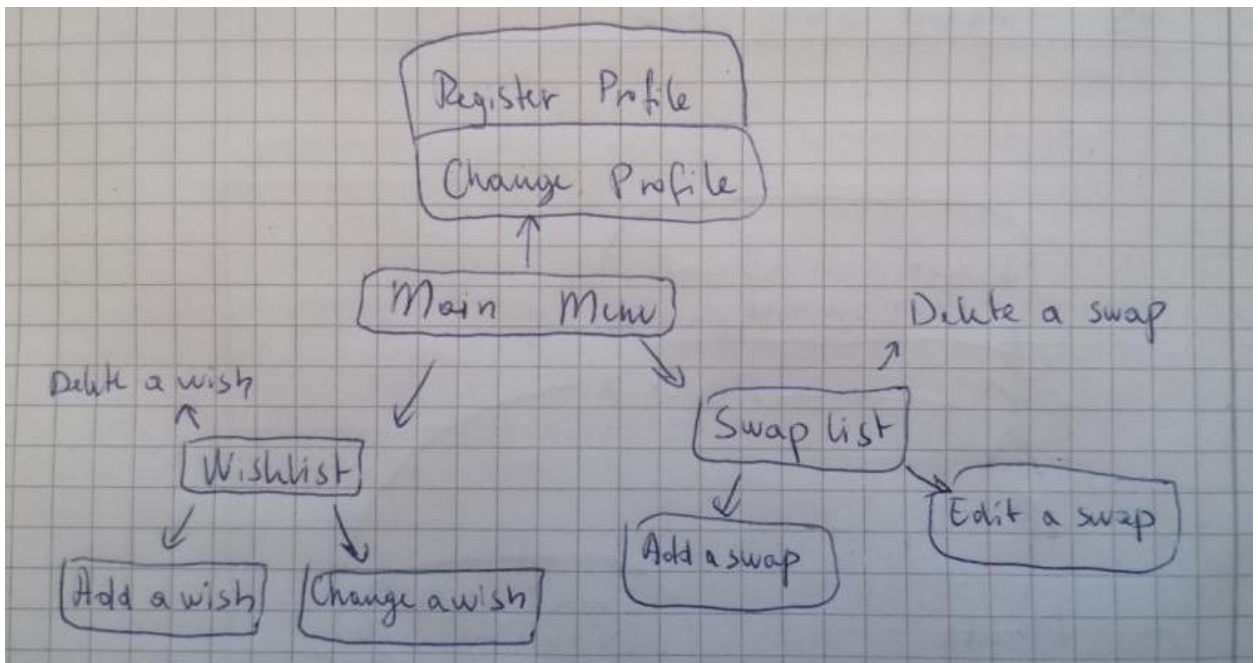
App Design and System Overview

Wireframe

The flow depends on whether the user is registered or not. If the user is not registered;

- Register → Add a wish → Add a swap → Main Menu

If the user is registered the flowchart shows possible navigation in the app. The circled ones are activities. The 2 delete actions do not require separate views



Flow of the app

Example of the different views is shown below



Plant Swap App

Main Menu

Wishlist

Swap list

Edit Profile

EXIT

Main menu

Plant Swap App

Alocasia Odora 5km

Florida Ghost anywhere

Philodendron Rio 10km

ADD NEW WISH

Wish list

Plant Swap App

Alocasia Calidora

Alocasia Frydek

Monstera Variegata

ADD NEW SWAP

Swap list

Plant Swap App

Name

Wish to swap for

SAVE

Add a swap



Plant Swap App

Notify me when

	▼
anthurium besseae	
anthurium veitchii	■
alocasia metallica	

is set for sale

	▼
any where	■
within 1 km	
within 5 km	

SAVE NOTIFICATION

Add a wish

Plant Swap App

Name

Address

Phone number

+ 45

E-mail

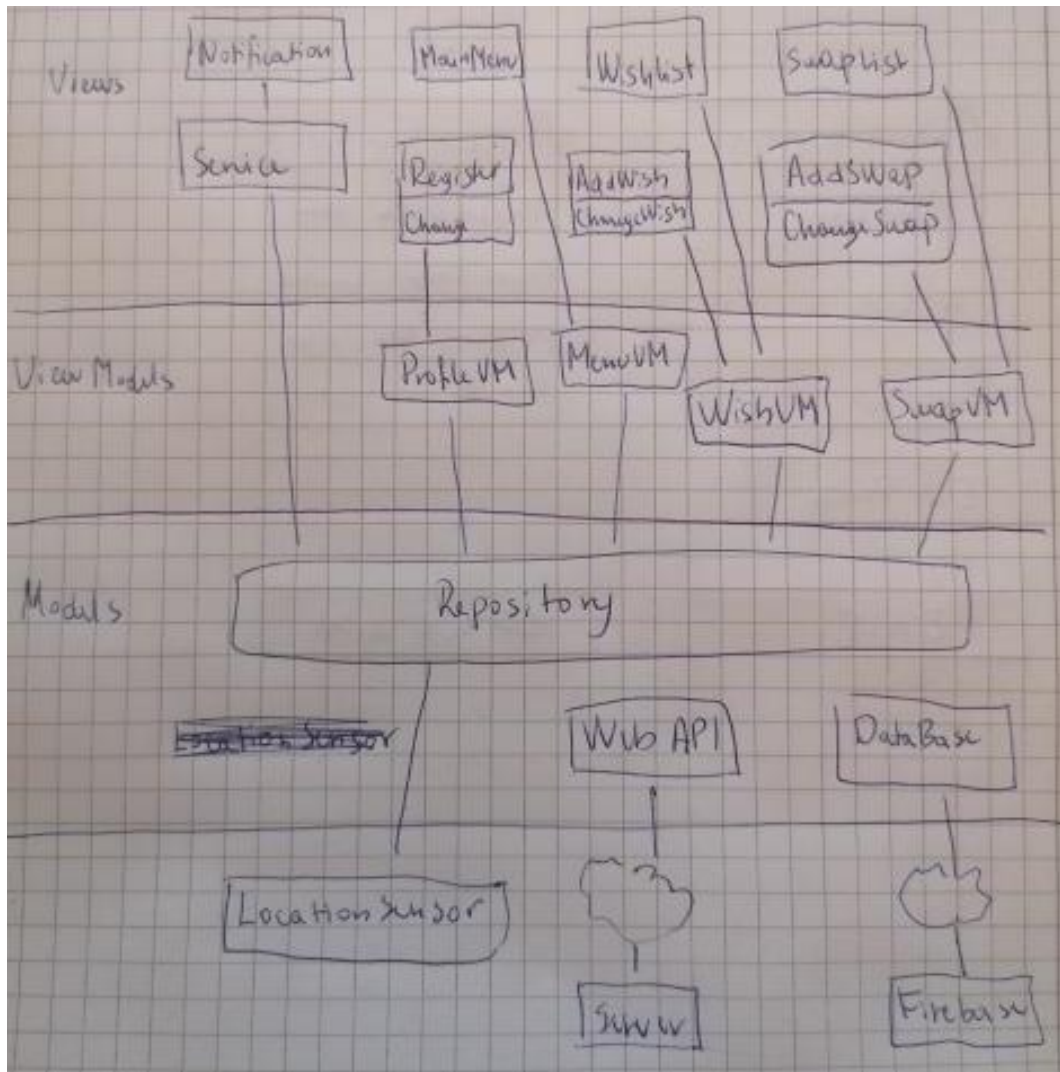
REGISTER

Register



Architecture overview

Connection between different components:



Technical Components

List of all Android SDK and external libraries/dependencies:

- Activities
- Services
- Firebase
- Google Maps
- Volley
- Glide
- Notifications
- Permissions



Other considerations

<Other Considerations, e.g. potential risks or needs for the project that you would like to address/discuss>