How to Use this Template

1. Make a copy [File → Make a copy...]
2. Rename this file: "**Capstone_Stage1**"
3. Replace the text in green

Submission Instructions

1. After you've completed all the sections, download this document as a PDF [File → Download as PDF]
2. Create a new GitHub repo for the capstone. Name it "**Capstone Project**"
3. Add this document to your repo. Make sure it's named "**Capstone_Stage1.pdf**"

Capstone Stage1

Description

Intended User

Features

User Interface Mocks

Main Screen

Main Screen – Touch marker (1)

Main Screen – Touch marker (2)

Main Screen – Touch marker (3)

Main Screen – search

Main Screen – Main drawer

Main Screen – Tablet mode (landscape)

Settings

Key Considerations

How will your app handle data persistence?

Describe any corner cases in the UX.

Describe any libraries you'll be using and share your reasoning for including them.

Next Steps: Required Tasks

- Task 1: Project Setup
- Task 2: Implement UI for Each Activity and Fragment
- Task 3: Make Activity & Fragments
- Task 4: Apply Google Analytics
- Task 5: Test before launching
- Task 6: (Optional) Power up

GitHub Username: ihangulo

Power contact – Map & Photo

Description

Do you meet many people everyday? But you cannot find that place or cannot remember his/her face? You have known already his/her phone number, address, profile photo, but it is so difficult to find. This is best solution for that problem.
This application shows names and photos on the map which is based on your phonebook data of android phone.

From now on, you can find your friends or clients very easily just like find good restaurant on google map.

Just see the map and touch marker!

Intended User

Salesman who have to meet many people, memorize them. Maybe they have more than 1000 people in their phone contact, but every time they want to visit their home or office, are very confused. This app will help their decision which is best order to visit, or who is nearest people which I must meet now.
Politicians have same problem. For example if he is the member of National Assembly(Congress, etc..) then he must meet everyday more than 100 or 1000 people. (Even more if there is election). So, how can they memorize their voter's face or characteristic. Of course they can make their own system, but it is so expensive & security problem. Then how about their phone contact information only. They can take pictures when they meet (like selfie together), and write some memo on contact's memo field. When they visit their country, then

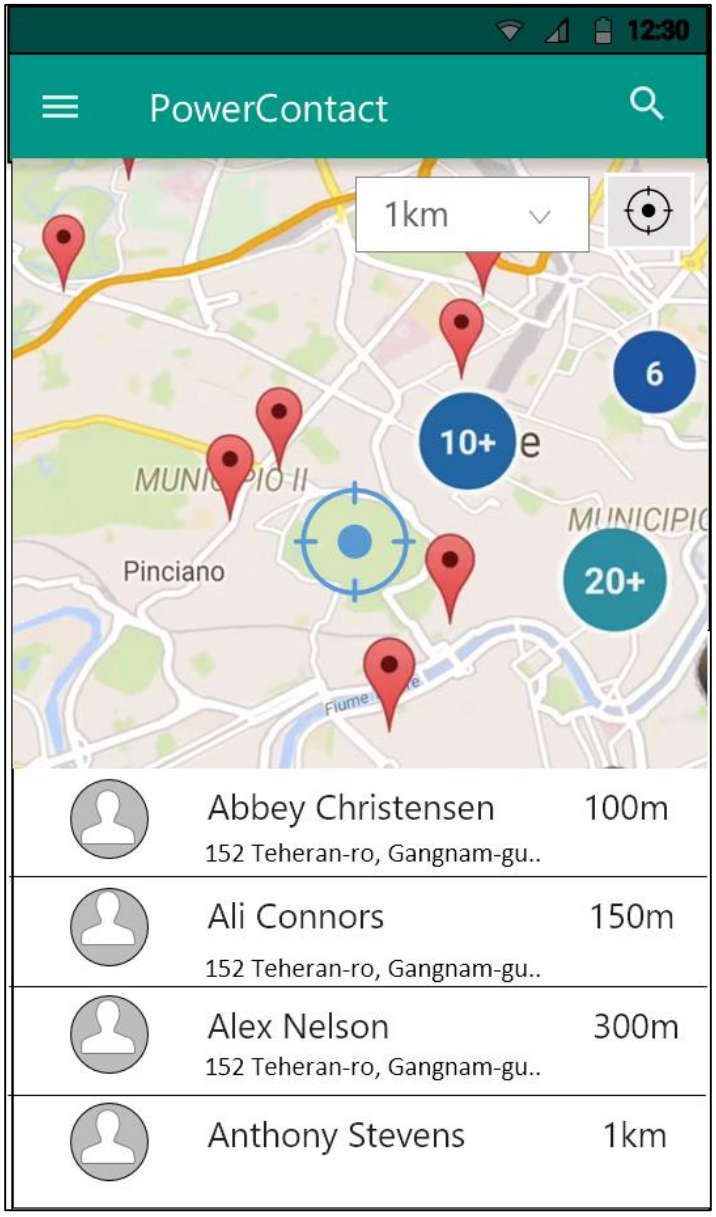
they can see map of photos who must met. Before meeting someone or when they meet, they can search it with ease.
Anyone who meet many people every day. This app is very useful.

Features

- display people’s name or photo on the google map
- Use only contacts information which is saved on mobile phone.
- Save all sub information (like latitude, longitude, etc.) only on phone. There is no security problems that your personal information leaks; (This app don’t use internet storage for secure reason)
- Show your contacts on the google map. You can select the range from your position by distance.
- Read from phone’s contact address & save location information on phone(SQLITE). So, after running app at the first time, then it runs very fast. Of course, If you want, it is possible to sync again.
- Support many map visual mode. Default marker, name only marker, name&photo marker, and so on.
- This app shows one google account based on user selection.

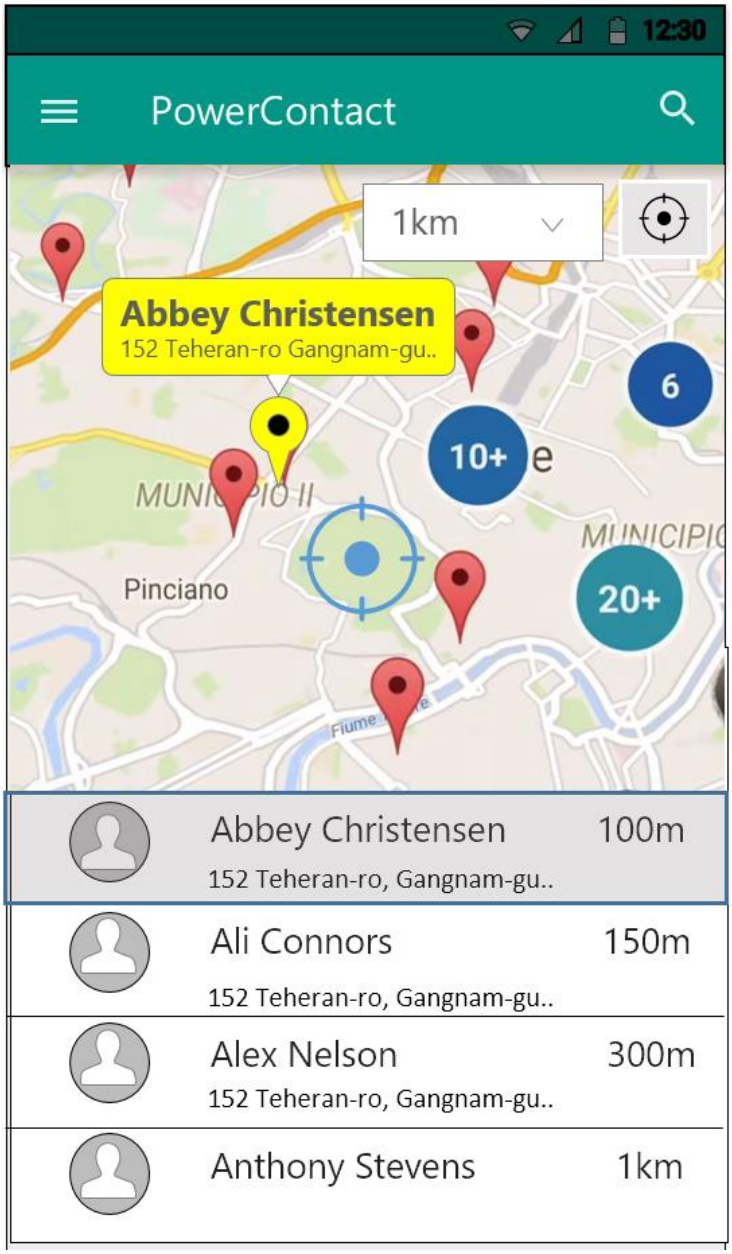
User Interface Mocks

Main Screen



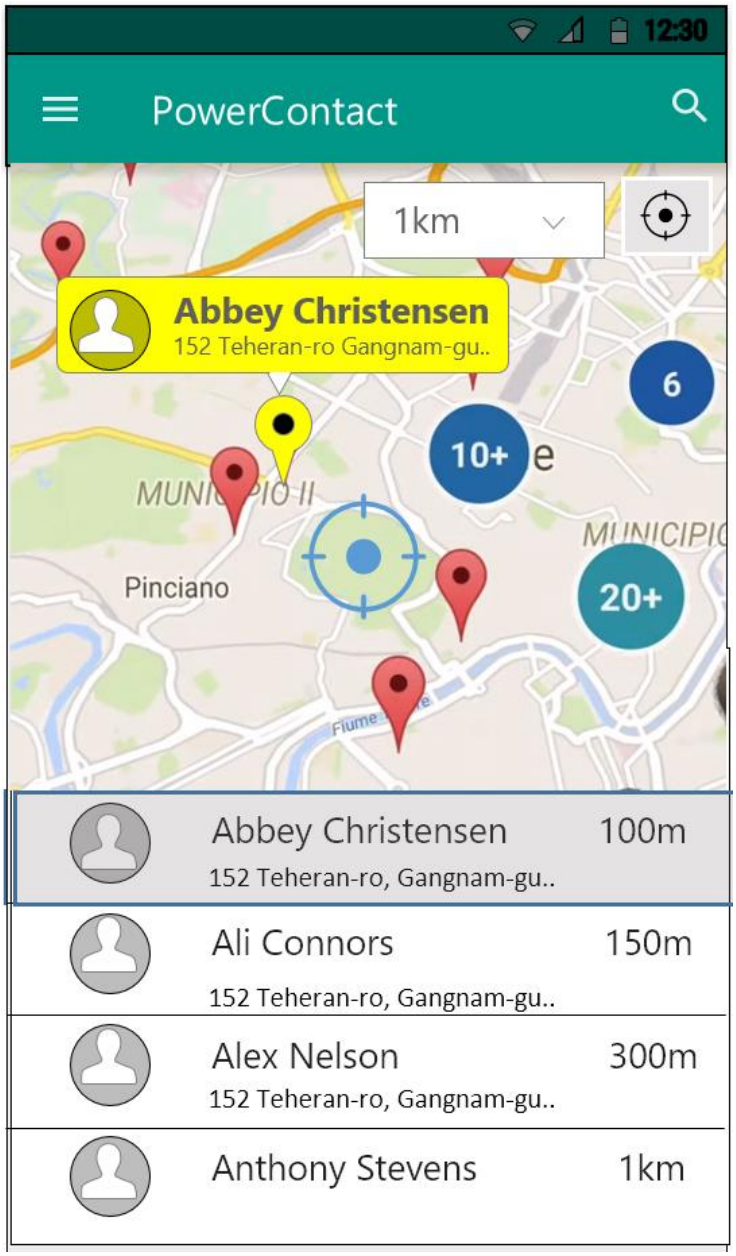
Main screen
It is divided two fragment (map / list)

Main Screen – Touch marker (1)



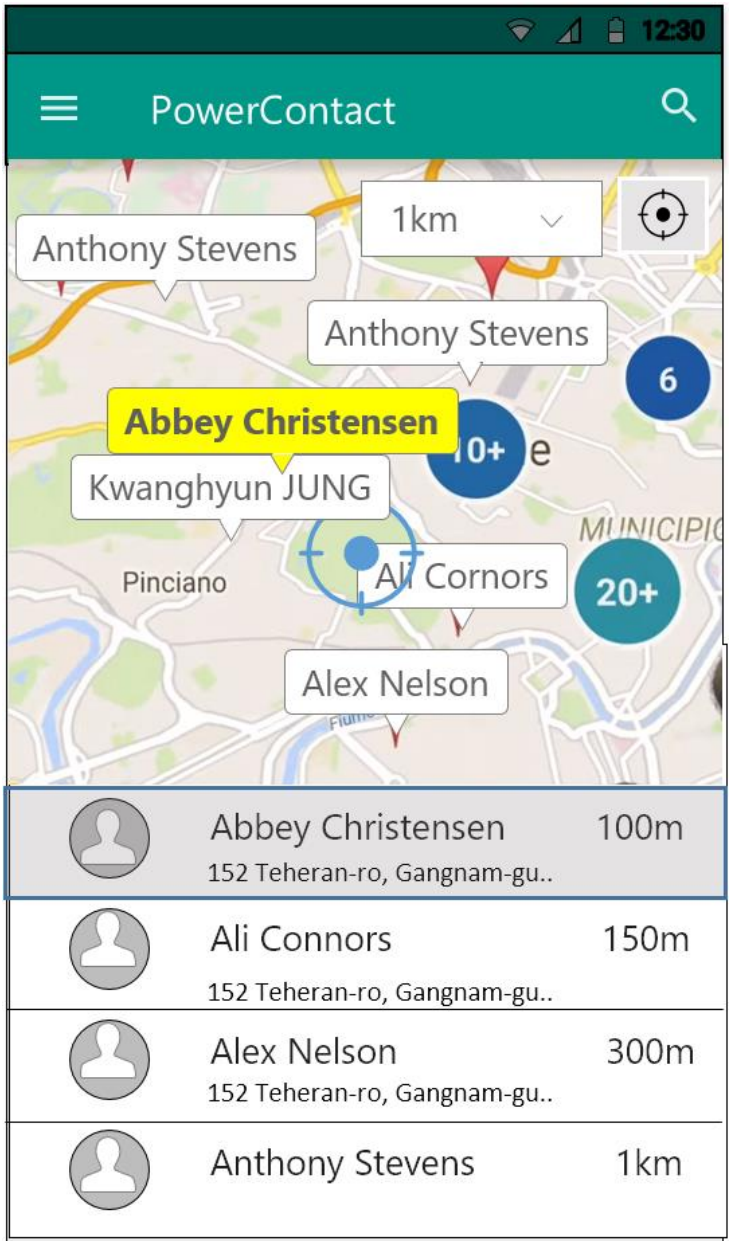
Default marker mode

Main Screen – Touch marker (2)



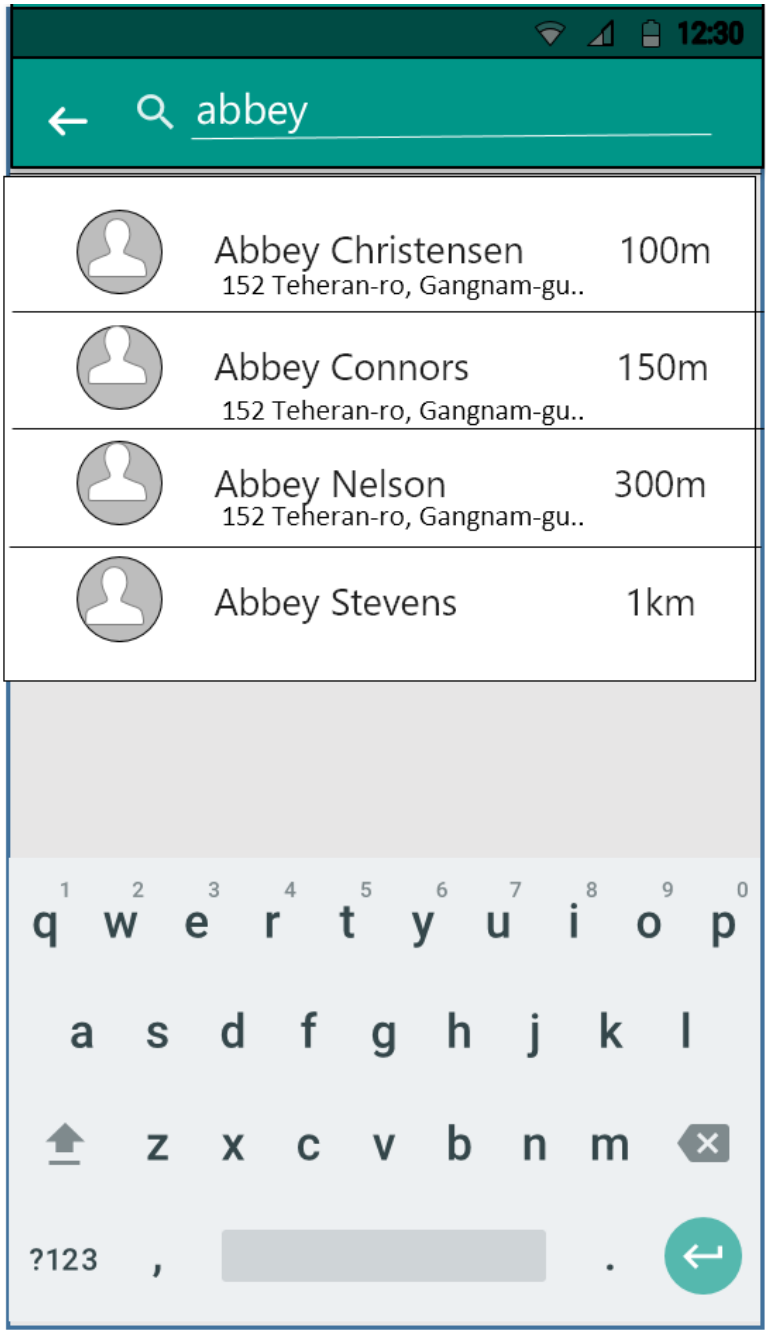
Default marker+ Photo&Name information

Main Screen – Touch marker (3)



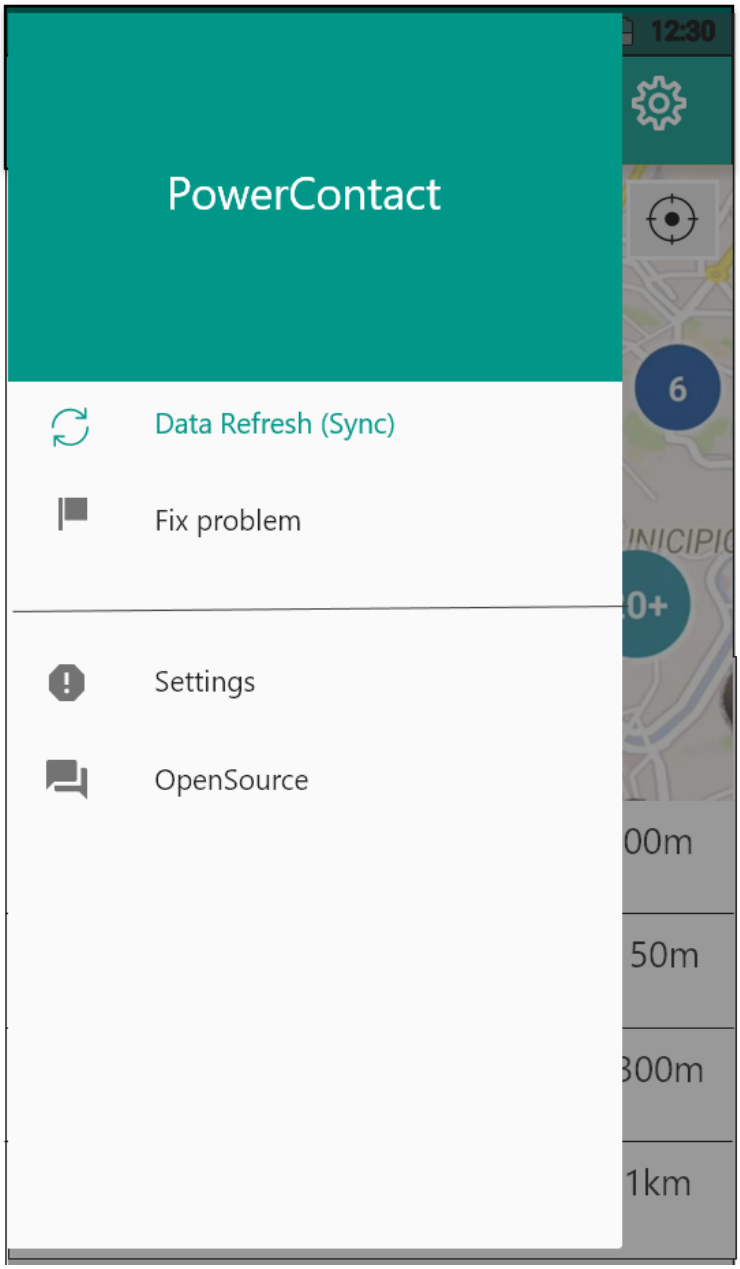
Name marker

Main Screen - search



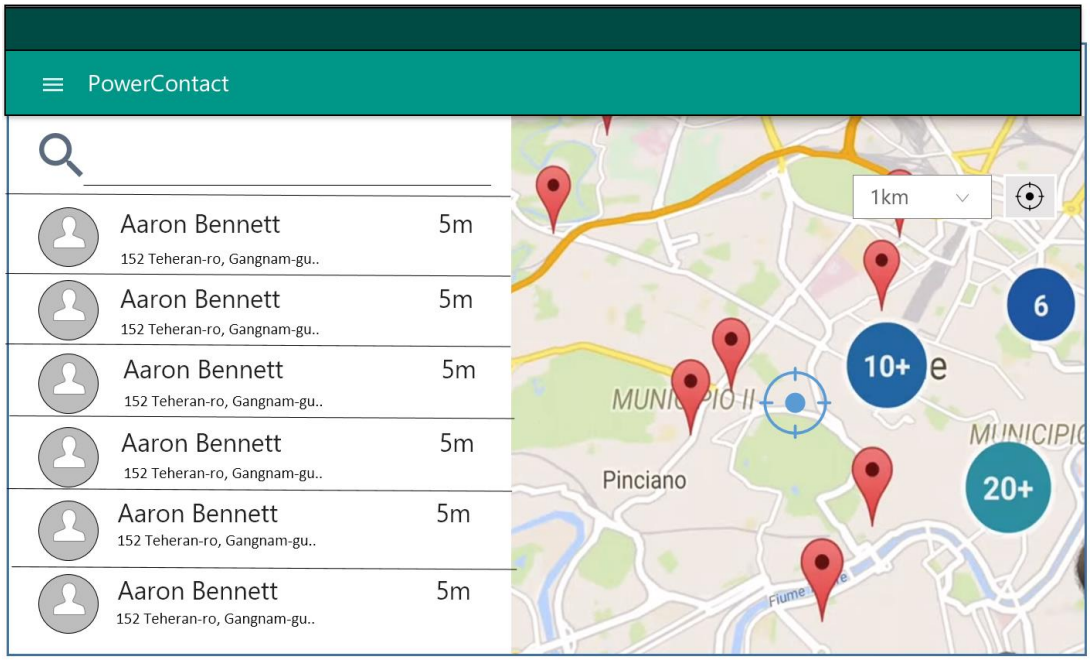
Search mode

Main Screen – Main drawer



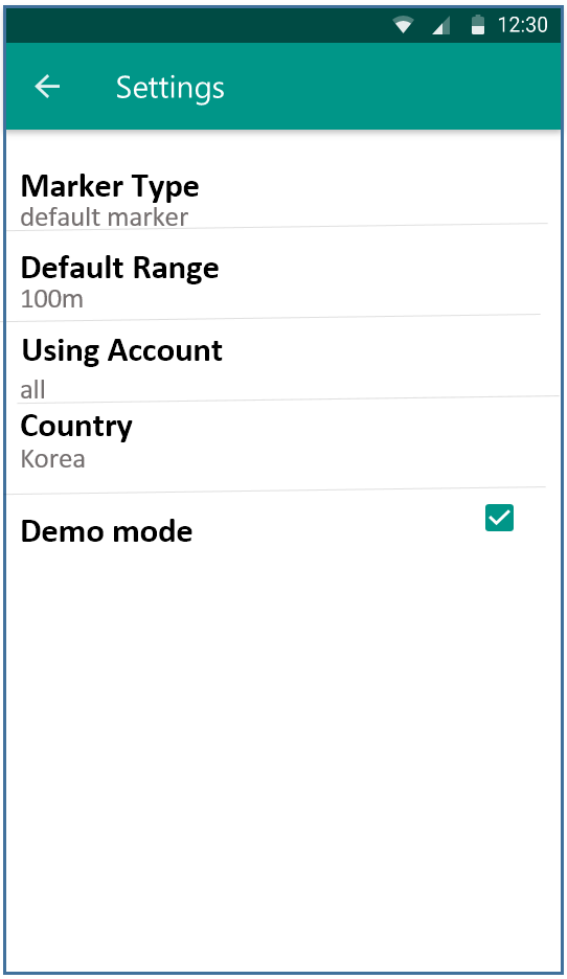
*icons will be changed

Main Screen - Tablet mode (landscape)



Tablet mode main screen

Settings



Option settings

Key Considerations

How will your app handle data persistence?

Using Android Contact Provider and make my own Content Provider(PowerContactProvider).
When the contacts sync, then I need read from some information from Contact Content Provider, and do some work (like get latitude & longitude), then save information to Sqlite Database.
If user select ‘sync’ menu, then it synchronize again.
When read the data, then put data to my Own data class (PowerContactAddress implements ClusterItem for marker clustering). PowerContactAddress class is used when show marker on map and listview. It is main data class to connect two fragments.

Describe any corner cases in the UX.

- No address data found – show message
- No Google Contacts exists. – show message
- Cannot found current location – show message
- User turn off the GPS – show message to turn on GPS
- If select marker on the map, but it is not appeared below listview ,vice versa. – process exception and show message
- Name is too long, user select “name only” or “name+photo” marker. – cut the name string and show ‘…’ or make it marquee attribute to flow.
- Address is too long with default marker when user touch marker, info window is shown. – same process when name is long
- When data sync, it stopped unexpectedly. Next time when app is launched.. – clear database and try to recync from user’s decision
-

Describe any libraries you’ll be using and share your reasoning for including them.

- Picasso - To process profile icon, I’ll use Picasso library. Because it is so powerful library to access images.
- Google Support Library - to support Material Design & Nice UI/UX
- Google Maps Library – to support map UI
- Google Maps Android API Utility Library – to manage marker clusters
- Google Analytics Library - to get information user’s
- (Option) Google Admob Library – to show ads for monetize.

Next Steps: Required Tasks

This is the section where you can take the main features of your app (declared above) and decompose them into tangible technical tasks that you can complete incrementally until you have a finished app.

Task 1: Project Setup

Configure libraries

- Google Maps Api
- Google Analytics(Google Play)
- Google Admob(Google Play)
- Picasso Library
- Google Maps Android API Utility Libaray

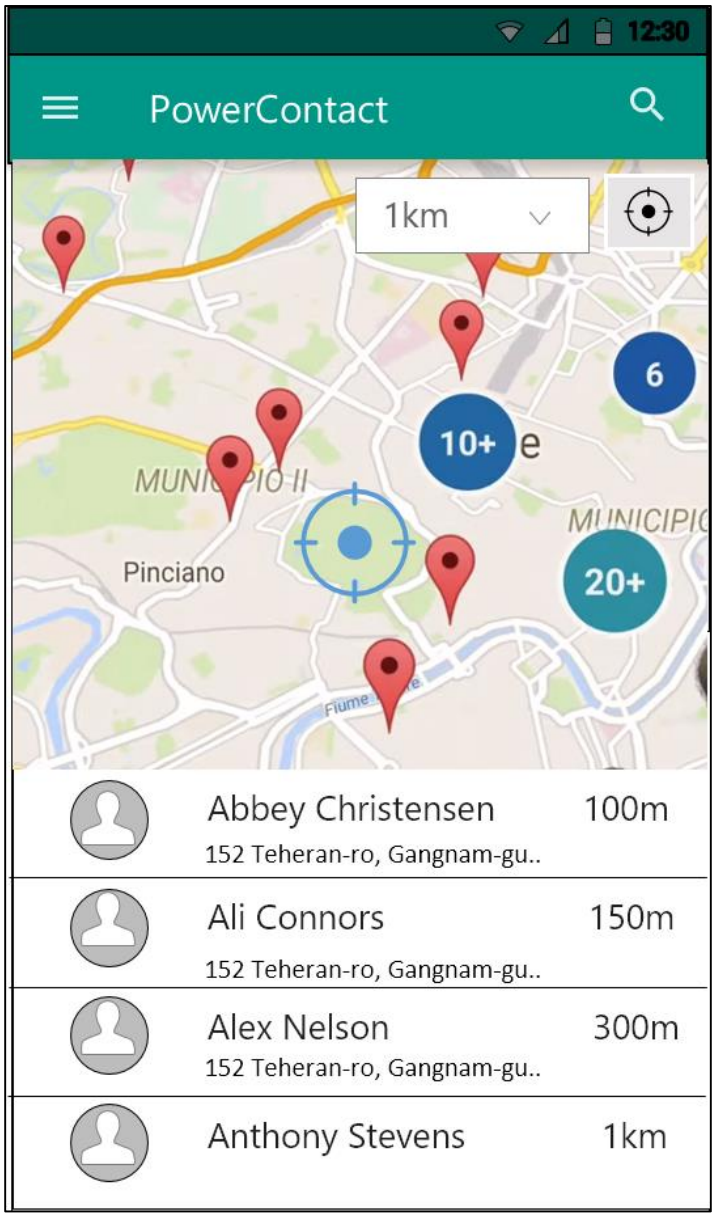
Preapare Google API key – Google Development site

Manifest need permission

- Internet connection & Network state
- Map (Fine location)
- Contacts(Read Contacts)
- Account (Read account)

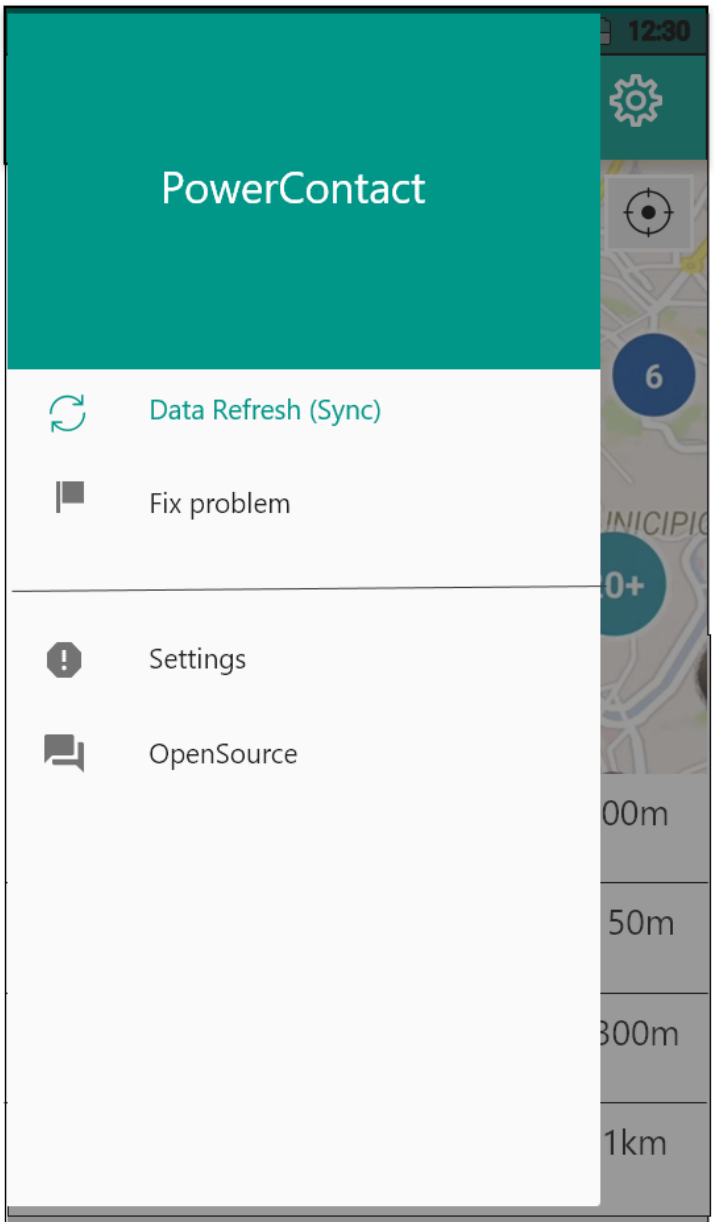
Task 2: Implement UI for Each Activity and Fragment

- Build UI for MainActivity



ListView, google Map, is devided on Phone mode.

- Build UI for something else



Main drawer

Task 3: Make Activity & Fragments

- Run App first time
  - Read Contacts from phone Contacts – include Android M issue

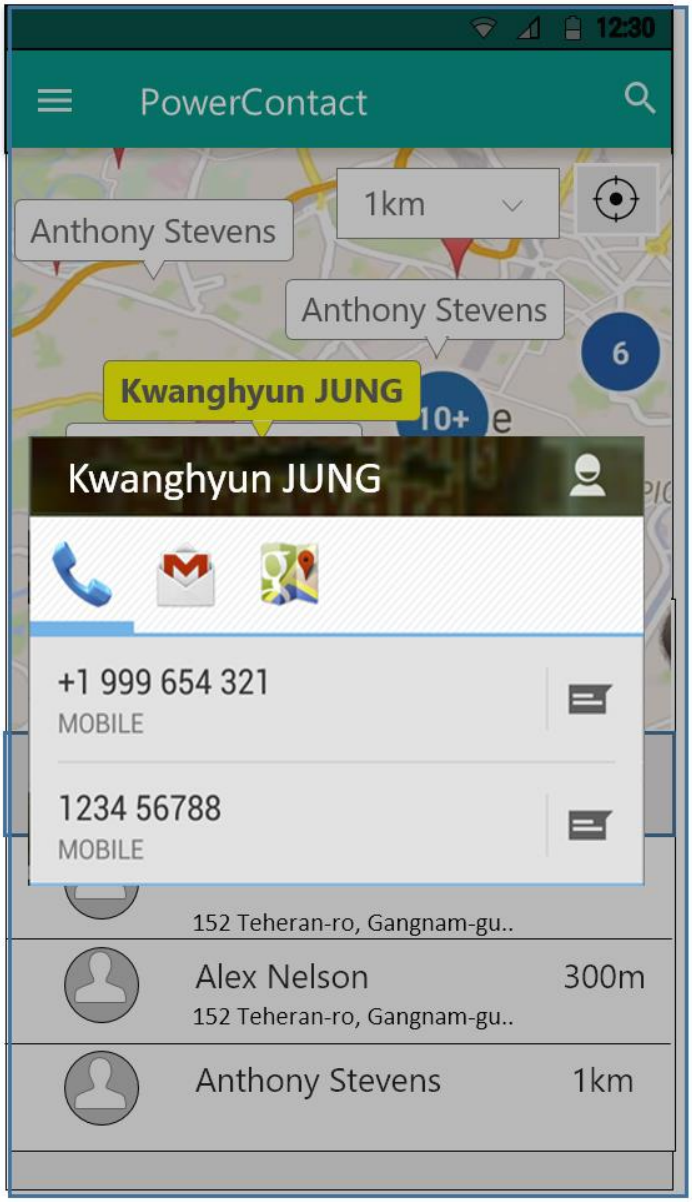
- Using Google Maps Api fetch LAT/LNG from Address
- Save address and other info into Sqlite Database
- For testing make dummy data

- Main Activity
  - Make PowerContactAddress class
  - Make PowerContactContract, PowerContact Content Provider and Dbhelper class
  - Read from Contacts Provider and save it to local database (1st)
  - Read from Contacts Provider , get latitude & longitude and some other information for calculation distance and save all information(Left Drawer action)
  - Select from database all data
  - Select from database by specific distance

- MapView Fragment

  - Configure map – show ‘current position’ button.
  - Get current location and move map camera.
  - Display default markers of spots which is passed from MainActivity
  - Display marker cluster using Map cluster library.
  - If touch clustered marker → zoom level +1
  - Make maker options.
- ListView Fragment
  - Configure listview and make loader
  - if touch listitem → (depend on marker mode option) move to item position and show info window or quick view

- if touch photo of listitem → show Quickview



Quickview is shown 1)touch info window [on map]
2)touch profile icon [on listview]

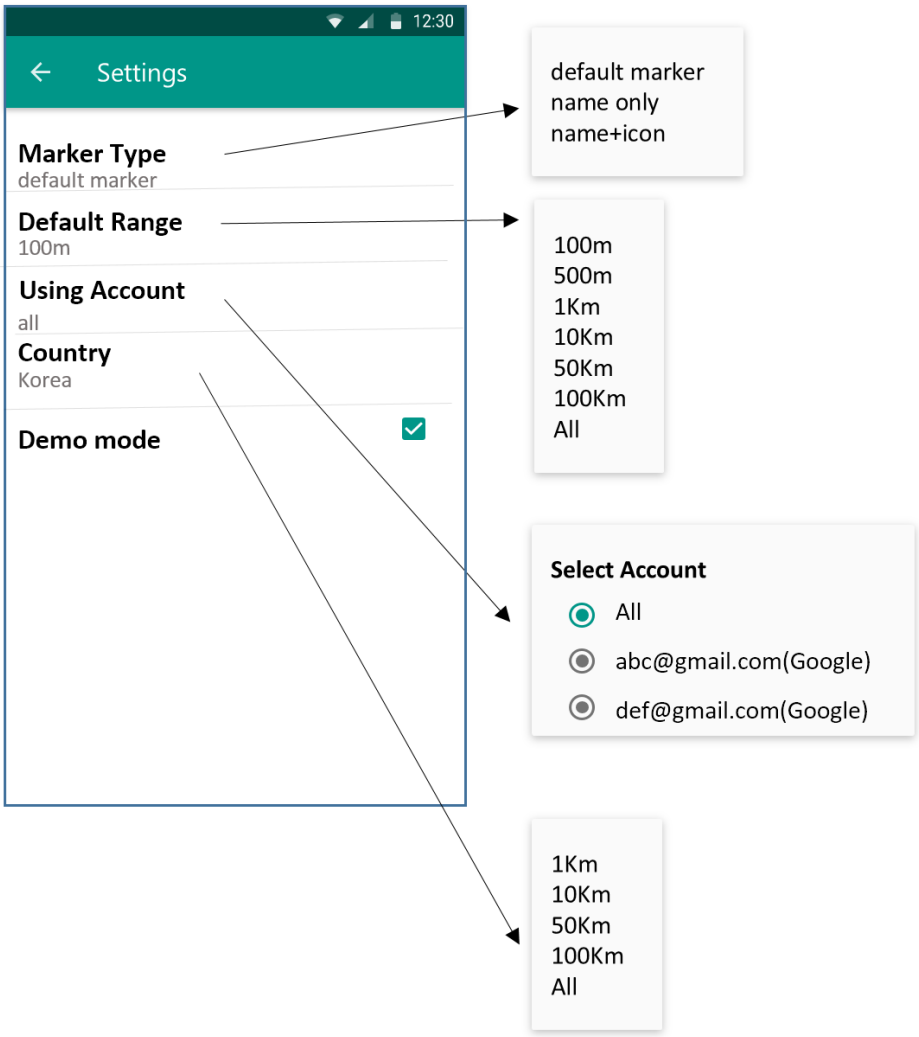
-

- MapView Fragement
  - Implement if touch marker, then listview selected (change background)

- MainActivity
  - After completion MapView & listview, then make 2-pane mode
  - Make search

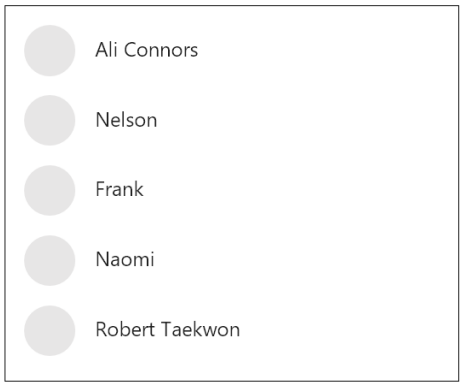
- SettingsActivity

- Make setting options



Setting options

- Left drawer action (MainActivity) & other menus
  - Fix problem –which have address but have no position(lat,lng) – show listview and connect to Contact Edit (system)
  - Open sources – show open source copyright which is used in this apps



Fix problem (dialogfragment) list

Task 4: Apply Google Analytics

Implement Google Analytics for stastics
analytics by screen name
For elementary information not for get all information

Task 5: Test before launching

-Input various address for everywhere in the world
-Arabic input test (RTL, LTR)
-Content Description
-Settings

Task 6: (Optional) Power up

- Google Admob (banner or interstitial ad)

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