How to Use this Template

1. Create a new document, and copy and paste the text from this template into your new document [Select All → Copy → Paste into new document]
2. Name your document file: "**Capstone_Stage1**"
3. Replace the text in green

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Detect Microdot

Description

We can offer information of microdot to users.
These days, smog is very serious invironment's problems in korea.
So I want to let our users know about smog's status each area.
You can easily recognize status of smog by color in our application.

Intended User

All people who interest of health, especially people who live in Korea, China where defect from microdot.
And users who are pregnant or are having kids, they are interest of their kids health.

Features

List the main features of your app. For example:

- Select city where checking smogs
- Save previous selected city.
- Select city in google map api.
- Widget of current city

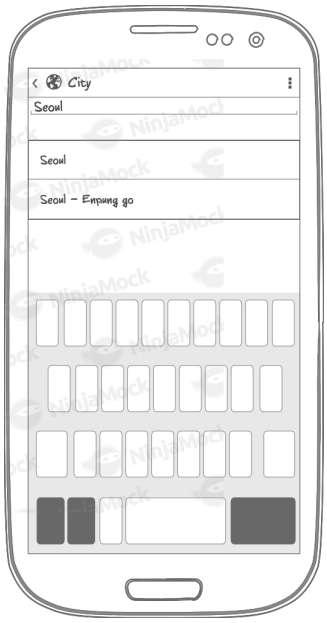
User Interface Mocks

These can be created by hand (take a photo of your drawings and insert them in this flow), or using a program like Google Drawings, www.ninjamock.com, Paper by 53, Photoshop or Balsamiq.

Screen 1

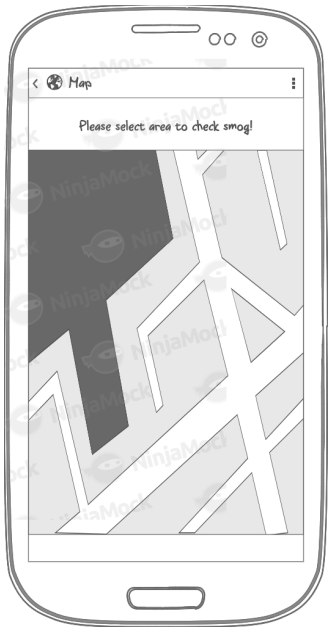
This screen offer information of microdot about current city.
Next page “Seoul”, “New York” are we can set clicked actionbar button.

Screen 2



This screen can search city to set main pages.
We already have many city that we can offer microdot's status.

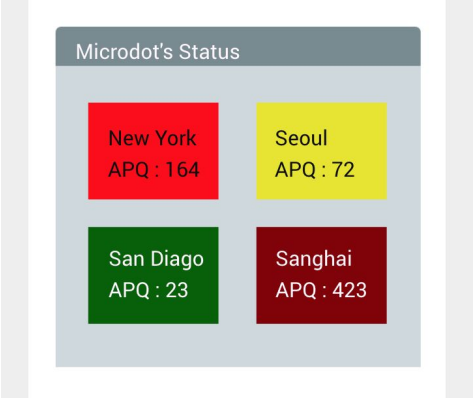
Screen 3



This screen can select location to set main pages.
Using Google Map API we can get location.

Add as many screens as you need to portray your app's UI flow.

Screen 4



We can provide widget, maximum city are four. We offer information of smog with color like below.

AQI	Air Pollution Level	Health Implications	Cautionary Statement (for PM2.5)
0 - 50	Good	Air quality is considered satisfactory, and air pollution poses little or no risk	None
51 -100	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
101-150	Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
151-200	Unhealthy	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion
201-300	Very Unhealthy	Health warnings of emergency conditions. The entire population is more likely to be affected.	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
300+	Hazardous	Health alert: everyone may experience more serious health effects	Everyone should avoid all outdoor exertion

Key Considerations

How will your app handle data persistence?

We can handle data persistence like city list and already setting city.
For city list, I'm going to use Room library in jetpack.

And for city where already set by users, I'm going to use sharedpreference.

Describe any edge or corner cases in the UX.

Current area have to set automatically, and users can add areas what they want in city search page or map page.

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

I plan to use Room library in Android jetpack to store about information of cities.

Describe how you will implement Google Play Services or other external services.

I'm going to use Google Map library to know about city's location.

Next Steps: Required Tasks

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

Requirement

1. App is written solely in the Java Programming Language
2. The App refer all the hardcoded strings from the strings.xml file.
3. The app enables RTL layout switching to support accessibility on RTL supported languages.
4. Library version Informations

Library	version
Gradle	3.3.2
AndroidStudio	3.3
Google Map	0.5
Room	2.1.0

Task 1: Project Setup

Write out the steps you will take to setup and/or configure this project. See previous implementation guides for an example.

- Google Map library
- Android Room library

Task 2: Implement UI for Each Activity and Fragment

List the subtasks. For example:

- Build UI for MainActivity
- Build UI for ViewPager in MainActivity
- Build UI for MicrodotFragment that can offer microdot's status
- Build UI for CitySearchActivity.
- Build UI for MapSearchActivity.

Task 3: Create Layout and Using GoggleMap API

Describe the next task. For example, "Implement Google Play Services," or "Handle Error Cases," or "Create Build Variant."

Describe the next task. List the subtasks. For example:

- Create layout for MainActivity, MicrodotFragment, CitySearchActivity, MapSearchActivity.
- Implement Google Play Services for using GoggleMap API.

Task 4: Data from webservice

I'm going to use api in http://aqicn.org/json-api/doc/#api-_

Describe the next task. List the subtasks. For example:

- Implement Retrofit and web service to receive data from aquicn.org domain.
- Implement Repository to communicate with webservice and local db.
- Implement MainViewModel to handle data for UI.

Task 5: Handle user's persistence

Describe the next task. List the subtasks. For example:

- Implement Room library and create city table.
- When user select city, put city data to room (database).

Task 6: Create Test

Describe the next task. List the subtasks. For example:

- Implement Espresso library.
- Implement UITest about user scenario.

Add as many tasks as you need to complete your app.

Submission Instructions

- After you've completed all the sections, download this document as a PDF [File → Download as PDF]
    - Make sure the PDF is named "**Capstone_Stage1.pdf**"
- Submit the PDF as a zip or in a GitHub project repo using the project submission portal

If using GitHub:

- Create a new GitHub repo for the capstone. Name it "**Capstone Project**"
- Add this document to your repo. Make sure it's named "**Capstone_Stage1.pdf**"