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**"

GitHub Username: Luis-Medina

What's that?

Description

This app helps you identify an object you're looking at by taking a picture of it with your mobile device camera. Have you ever wondered, what's this animal I'm looking at? What kind of plant is that? This app will answer those questions for you, using Google's Cloud Vision API technology.

Intended User

The intended user of this app is anyone who needs help identifying an object.

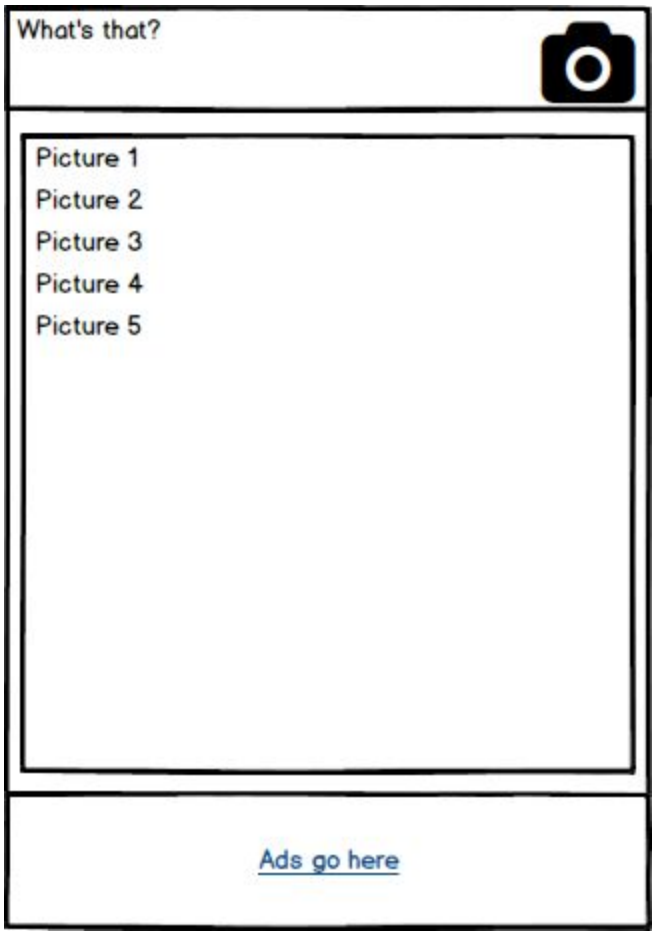
Features

- Takes pictures of objects
- Sends binary encoded picture to Google's servers for image processing.
- Displays results, if any, obtained from Google's servers.
- Saves previous results for user retrieval at a later time.

User Interface Mocks

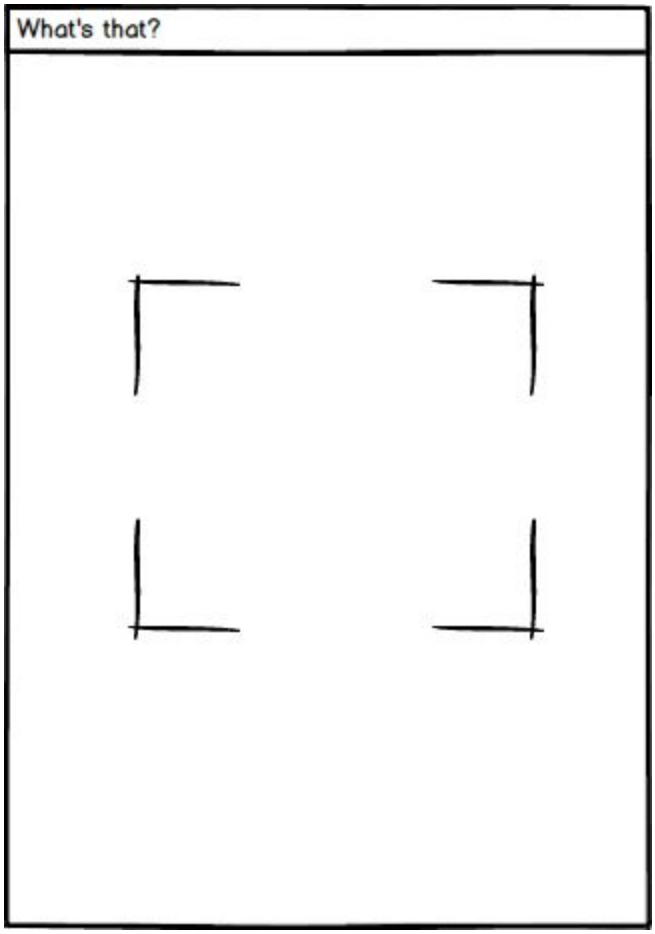
These can be created by hand (take a photo of your drawings and insert them in this flow), or using a program like Photoshop or Balsamiq.

Screen 1



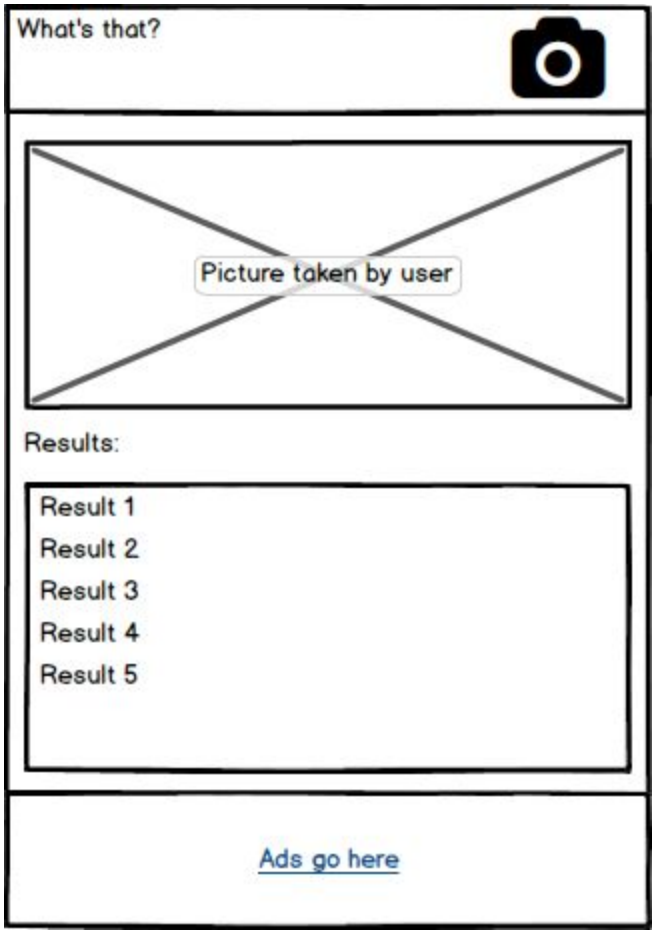
This is the home screen. It allows you to take a picture of an object using the camera menu item and view previously taken pictures. There is an ad banner on the bottom. Clicking on any list item takes you to the saved results/detail screen for that item.

Screen 2



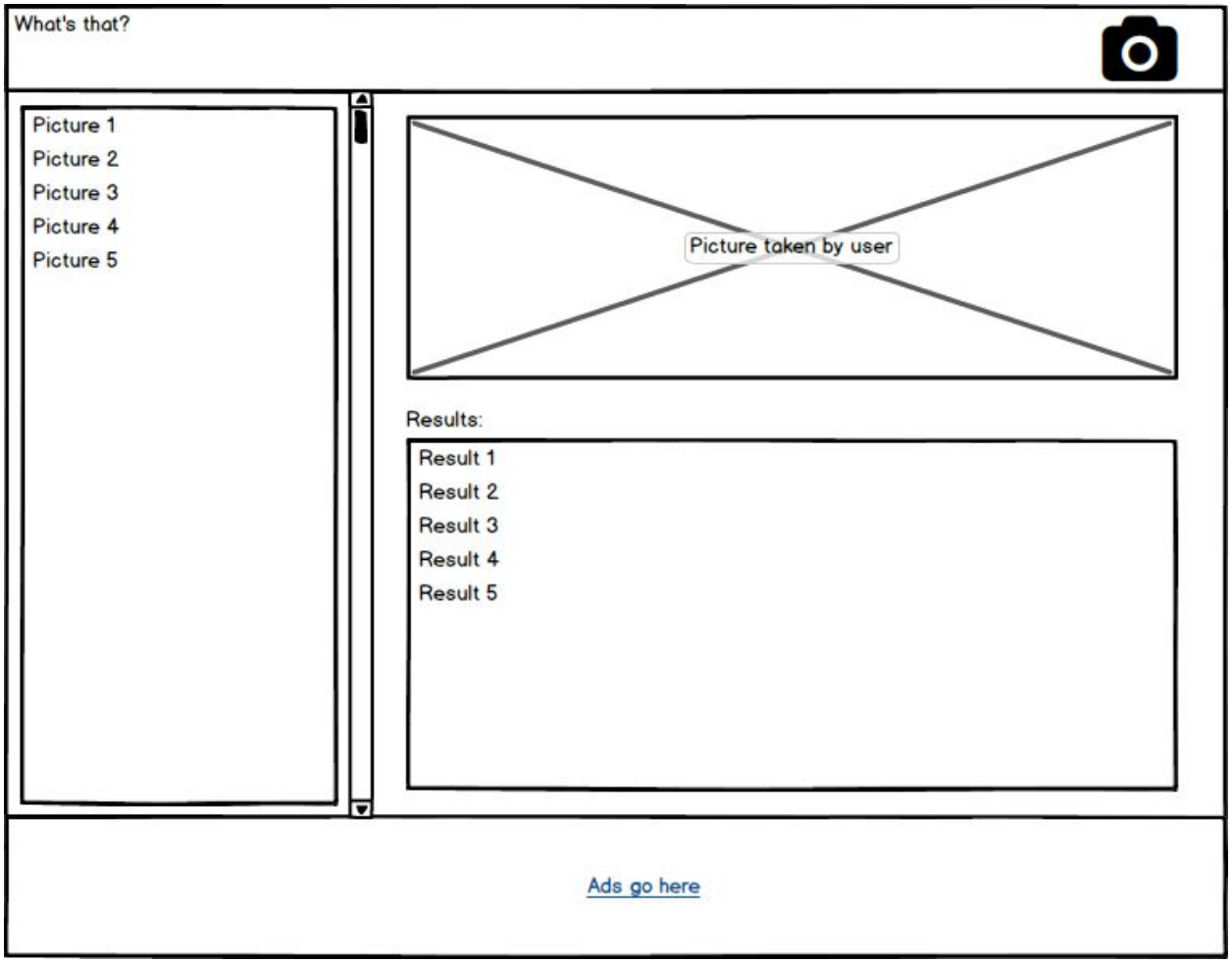
This screen allows the user to take a picture of the object in question.

Screen 3



This screen shows the results/details of the image processing.

Screen 4



This is the layout for the tablet view, utilizing a master/detail flow. Clicking on the camera menu button allows the user to take a picture, and then takes the user back to this screen with the new picture added to the list on the left and the results showing on the right.

Key Considerations

How will your app handle data persistence?

A Content Provider will be built to store previous results.

Describe any corner cases in the UX.

Screen 3 will contain an up arrow on the action bar which will allow the user to go back to screen 1.

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

1. OKHttp - to upload the images to Google's servers for processing and receive the processing results.
2. GSON - to parse the JSON received from Google's servers.

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

1. Add OKHttp and GSON dependencies to the build.gradle file.
2. Include the Google Cloud Vision API key and endpoint URL in the project.

Task 2: Implement UI for Each Activity and Fragment

- Implement UI for Home screen
- Implement UI for Camera screen
- Implement UI for Results screen as fragment so that it can be reused in tablet layout
- Implement UI for tablet layout

Task 3: Implement Google Admob integration

- Ads should be displayed on the bottom of the screen using the Admob for Android library

Task 4: Implement Google Cloud Vision API integration

- Resize image if it's too big as there is a 2 MB limit for the upload.
- Base64 encode the image.

- Parse JSON result from server.

Task 5: Implement Camera integration

- Use Android camera intent to take a picture and receive the intent result.

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**"