REQUIREMENTS

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Introduction

For our capstone project, we will be building a video sharing app for Android phones. Users will record short 7-10 second videos, and be able to share them with other users. The purpose of having this hard limit on the length of the videos is to maximize interesting content within a short period. Users will also have the option to follow their friends and favorite app users, and accumulate a video feed which they can browse through. By simply tapping their finger, a consumer can quickly cycle through all videos from their followed producers. Ideally, popular content creators will upload particularly funny or amusing videos. Users can react to videos with a thumbs up or thumbs down (subject to change). Our ideal market are millennials, and we will target our app to a generally younger audience.

Possible Project Names

Views

Floors

Heights

Technical Details/Challenges

Android apps are built using Java, so we will be using the Android Studio IDE. In order to accomplish our design, we will also require the use of a database with a remote server from which to host the app's video content. We will need to connect multiple users to the database and load the videos that they record in the app onto the server. Also, we will need to maintain a cache of videos on the users local device to streamline the viewing speed.

We will require the use of a server, however we are already in possession of a tower with ample storage and processing power. Our server will be running Ubuntu with MySQL and Apache. We will rely on a web framework (likely Flask, other options specified below) for the server-side operations. In terms of the client, we will be utilizing the Android API for most of our goals, and we will acquire additional

libraries as needed. For transfering files to the server, we will be using the Java OkHTTP library. We will also rely on the phone's back facing and front facing camera, so we will obviously need to request the user for those permissions in order for the app to fully function. If the app is successful or if we are able to make significant progress, we will port the app to iOS.

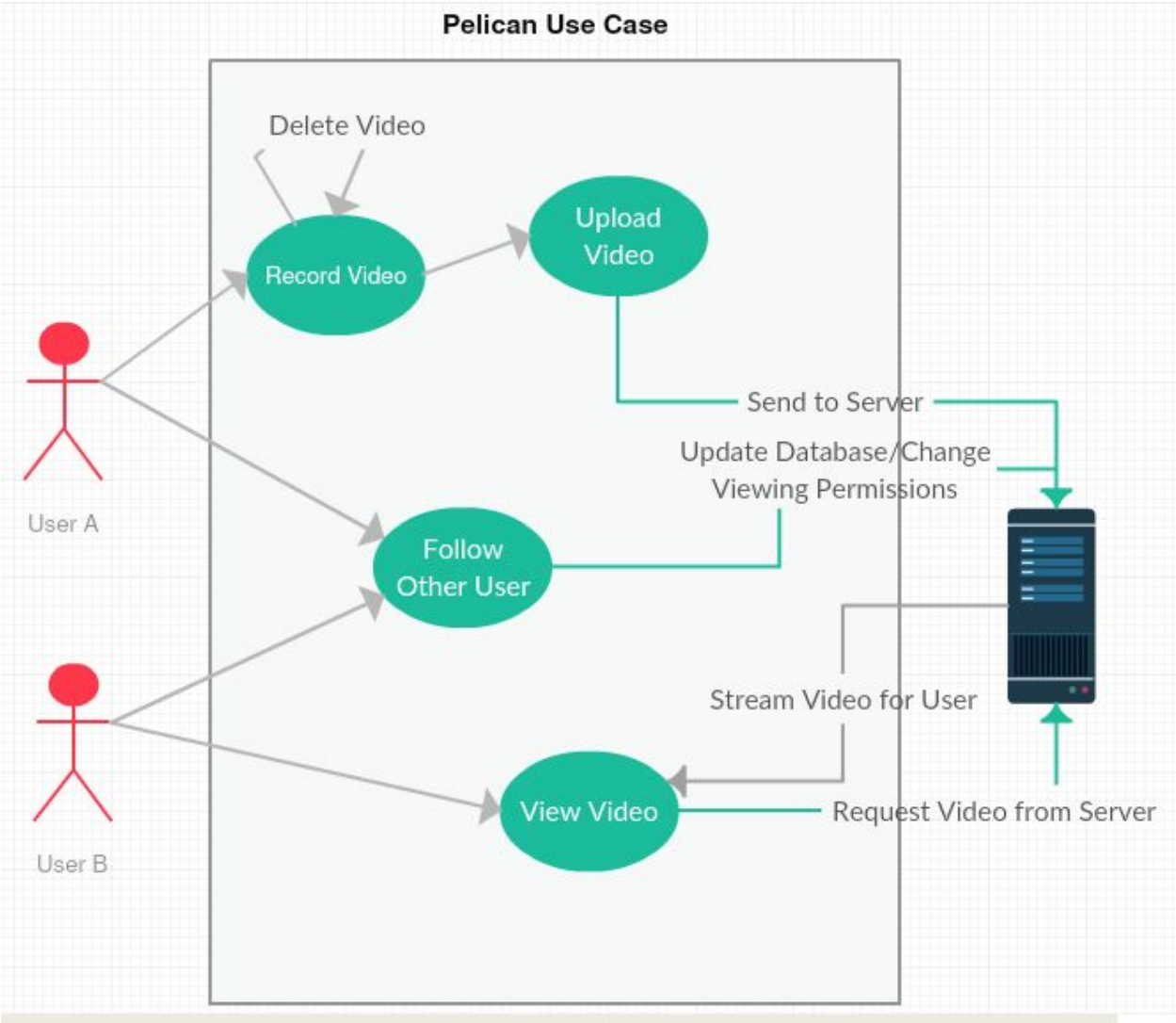
Deliverables

Android App

- Camera usage
    - Android Camera API - camera2 class
- Video Streaming
    - Android VideoView class
- File Management
    - Android File class
- Server Interaction
    - OkHTTP library
- Additional libraries will be acquired as needed

Server Software

- Ubuntu
- Web Framework
    - Python Flask Framework OR Express.js on Node.js
- MySQL
- Apache Web Server



Use Case Description:

Users will be able to record videos, and will have the option of sending their recorded video files to the server where it will be viewable to that users followers. They Will also be able to follow other users and receive a stream view of their videos as well.

Framework Comparison

Possible Options:

Flask

Django

Express.js with Node.js