CSIS: 3126 – Design Project I

Project Requirements – SnapChat Clone

**Stakeholders**: Google (API), Microsoft (Computer Vision), SnapChat (Competitor)

**Project Team:** Jonathan Winter

**Project Requirements Update Log**

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| --- | --- | --- | --- |
| Version | Date | Author | Description |
| 1.00 | 12/02/2018 | Jonathan Winter | Initial Version |

**Project Proposal / Description**

Many applications, such as SnapChat, store all of their user messages in large data centers. This kind of data storage can causs distrust by the user, companies to misuse the data, and leaves the data open to possible theft. This project will capitalize on the desire for a private and secure messaging social media application. The application will allow users to send texts, pictures, and video messages to one or more users. The application will store user data sent over the application for 24 hours before being destroyed. Facial recognition software will be implemented in the program to allow users to take funny pictures.

**Front-End**

The application will run on Android devices. The software will be designed for Android Ice Cream Sandwich and later to allow for approximately 99% of Android phone and tablets to run the program. Development will be done using the Android Studio IDE. Testing will be done with Android Studio’s built in android emulator and with my personal Galaxy Note 9 device.

**Back-End**

Google-Cloud and Firebase will allow for limits on-device data by saving JSON data in the Firebase real time database. Notifications can be sent with Firebase’s Cloud Messaging System. In addition to automated real time data synchronization, Firebase will also handle offline cases gracefully. Users can be authenticated through a variety of identity providers which will insure rapid development of the back-end service for my project.

**Project Scope**

1. Sign up and Login:
   1. Use Google Firebase Authentication to create a fast and secure user experience that allows a user to sign up for the product and login to have a personalized experience.
2. Camera:
   1. Allow for a user to send and receive photos taken on their hand-held device through the application.
3. Story:
   1. Allow for a user to create story boards that show an image for 5 seconds every time it is displayed, for up to 24 hours. After 24 hours, the image will be deleted from the story.
4. Chat:
   1. Allow for users to send images to each other through Google Firebase.
5. Security:
   1. Using Google Firebase will create a basic safety net for users. Possibly implement stronger features in the future.
6. Bonus:
   1. If there is time, allow for a user to swap the camera to a front facing view to take a selfie. The user can add overlays to create funny pictures using facial recognition software.

**Potential Problems**

This will be the largest project I have ever built in my career as a Software Engineering Student. I may be underestimating the time it will take to create a project of this caliber. I’ve never worked with Android Studio or mobile application development before so it will take some time to get used to. Also, I will be working with Microsoft and Google’s Vision for facial recognition. This technology is complicated and will be challenging to implement in my project. Creating my own graphics will be a challenge as well because I do not have a graphics design background.