CPRE 491 STATUS REPORT #4

October 27, 2019 - November 3, 2019

Group: SDMAY20-52

Project Title: KEY EXCHANGE OUTSIDE OF TCP/IP

Client & Advisor: Julie Rursch

Team Members:

- Logan Woolery   Lead Integrations Engineer
- Jacob Moody   Server Developer Lead
- Joel Wacker   Android Developer
- Andre C   Server Development Tester
- Jack Potter   Client Architecture Tester
- Jordan Svoboda   IOS Developer

Past Week Accomplishments

- ❖ Andre- Continuing developing test code
  - ➢ Checking database communications
  - ➢ Need to look into testing for cryptography

- ❖ Jacob-Continued development of backend code
  - ➢ Began testing some methods for passing messages to and from the server and client

- ❖ Jack-
  - ➢ Was unable to get iOS development working nicely on linux
  - ➢ Was able to get Android Studio working, though emulating phone is very slow
    - ■ May need to source physical device for testing
  - ➢ Research into sources of randomness for encryption key generation

- ❖ Joel
  - ➢ Android x86 Virtual Machine is functional
  - ➢ Android Studio Emulation in testing
  - ➢ Basic Application testing
  - ➢ Further Research on Data Transmission
    - ■ QRCodes
    - ■ Zbar

- ❖ Jordan-Continued development of prototype app
  - ➢ Got a MacBook from the library to attempt to build the sample app on it
    - ■ Unable to run Xcode or Flutter tools
    - ■ Will need to reevaluate how we go about building for iOS

- ❖ Logan
  - ➢ Begin flutter development

Pending Issues
- ❖ Need to find a new way to build code for iOS
  - ➢ There is an article detailing a workaround for this, so we'll try that this week

Individual Contributions

Team Member	Contribution	Weekly Hours	Total
Jacob Moody	Team Meetings Research	6	27
Joel Wacker	Team Meetings Research	7	26
Andre C	Team Meetings Research	6	27
Jordan Svoboda	Team Meetings iOS development	6	28
Logan Woolery	Team Meetings Research	5	26
Jack Potter	Team Meetings Research	7	28

Plans for Coming Week

- ❖ Andre- Continuing development for tests
  - ➢ Database communication
  - ➢ Verifying key exchanges

- ❖ Jacob-Continued development of backend code
  - ➢ Continuing to develop a method of communication between the server and the client devices

- ❖ Jack
  - ➢ research into crypto libraries needed for app
    - ■ Cross platform library?
    - ■ separate libraries for each platform?

- ❖ Joel
  - ➢ Android x86 Playground
    - ■ How to upload applications and using Google Play Store
  - ➢ Use of QRcodes for data transmission
    - ■ Zbar for deciphering qrcodes

- ❖ Jordan- Continue iOS app prototyping
  - ➢ Try and get the workaround for developing Flutter for iOS on Windows working
    - ■ If this doesn't work, we will need to reevaluate our iOS development
  - ➢ Continue trying to develop the prototype
    - ■ Welcome screen for the app
- ❖ Logan
  - ➢ Protocol POC