

# Project 1

## CIS 422/522 Software Methodologies

Group 5 - 4-27-2020

Team Members (and initials): Irfan Filipovic (IF), Shane Folden (SF), Man Him Fung (MF),  
Mason Jones (MJ), Siqi Wang (SW)

## Project Plan

***A management plan. How is your team organized? How is the work divided among team members? How does your team make decisions? How will your team meet and how will it communicate?***

- Group Meetings are done via Microsoft Teams audio calls.
  - Most non-meeting discussion takes place in the Microsoft Teams chat.
  - We have exchanged phone numbers and emails as well.
- We have hard scheduled meetings Tuesdays and Thursdays at 3:30pm. We have a hard scheduled meeting every Sunday at our weekly-determined best time. All other meetings are scheduled as seen necessary at our most convenient times.
- Our group makes decisions via our Microsoft Teams audio calls. We don't really have a group leader for our meetings, we move together from bullet point to bullet point. So we decide as a group when decisions need to be made. Hearing other people's input can be helpful because we often hear ideas that we may not have considered.

As we did not establish a group hierarchy at the start of the project, and did not have a meeting until underway. We decided to not implement one as we are progressing as a group. On future collaborations and projects whether in an educational or professional setting we will know to establish group roles.

***Work breakdown schedule (with > 10 milestones) and project schedule (who will do what).***

Task	Assignment	Completion date	Time spent (hrs)
V1 of SRS	Group Work	2020-04-10	2
V1 of SDS	Group Work	2020-04-15	2

Project plan	Group Work	2020-04-15	1
Database pre-v1 implementation	MF, MJ	2020-04-19	Database set up: 1 hr by MF,MJ
IOS app pre-v1 impl.	IF, SF, SW	2020-04-19	Base app creation: 6 by IF
Database v1 designed	MF, MJ	2020-04-24	Database tables and connection: 1 Query function: 4hrs done by MJ Assist: MF
IOS app v1 designed	IF, SF, SW	2020-04-24	Button and obj c: ? by SW Code integration: 4 by IF At home: ? by SF
Transmit data from app to database (testing)	Group Work	2020-04-19	1
V2 of SRS	Group Work	2020-04-27	
V2 of SDS	Group Work	2020-04-27	
Polish database (v2)	MF, MJ	TBD	
Backup database implementation	MF	2020-04-25	Backup database: 1 Set up auto backup: 2 Scripting auto push:: 1 testing : 1
Finalize database and all its functions (v3)	MF, MJ	2020-04-26	Output formatted text and json files: 3 by MF
Finalize IOS application (v2)	IF, SF, SW	2020-04-26	UI Fixes: 3 by IF, ? by SF
Visual website implementation	MJ/group assistance	2020-04-27	A lot by MJ
Testing plan	Group Work -Backup DB test:MF	TBD	Backup DB test: 1

Programmer Document	Group Work	2020-04-27	3
Installation Instruction	Group Work	2020-04-27	3
User Document	SF	2020-04-27	1

***Monitoring and reporting: How individual and project progress will be monitored to keep track of who did what and when did they do it?***

- Personal progress will be tracked via individual descriptive timesheets
- Project progress will be tracked via "Task\_and\_Assignment\_Breakdown.xlsx"

***A build plan. What is the sequence of steps you will take to build the system? When will each "build" of the system take place***

- Requirement analysis
  - Project Week 1: 1st and 2nd Group meeting, will allow 3rd meeting.
- Create app / create db
  - Project Week 2 and 3
- Test compatibility between app and db
  - Starting at the end of Project Week 2.
  - Testing must finish on April 26th.
- Implement backup db script
  - Starting at the end of Project Week 2 into Week 3.
- Implement page to host location data map
  - Starting at the end of Project Week 2 into Week 3.
- Refine app and db
  - Starting Project Week 2 until submitted.
  - Will depend upon issues that arise in steps above.

***A rationale for the build plan. Why have you broken the system into these parts, and why have you chosen these particular steps to build the system? What are your risks and your risk reduction strategies?***

The system we are attempting to create is composed of two integral parts, the application and the database. Our application will track the user of the device and send this information to the database. To ensure we will have a working system these two components must be implemented first. Once each component is complete we must ensure that communication is

possible, before moving on to refining each component and maintaining a copy of the database. The visualization will be incorporated towards the end as it is important to verify we have a functioning application and database before posting collected data.

Throughout building the system, we will test for compatibility between the database and application once a change has been made. This will assist in ensuring any issue that arises is caught in a timely manner, and will provide steps to locating the change that raised the error.

- Background Functionality
  - **Risk:** Mobile device does not allow the application created to process in the background and allow updates to the database. This is a large problem for users who will need to continue using their device.
  - **Risk Reduction Strategy:** We will assign a member to researching and implementing location tracking and executing our application in the background.
- Version Control (Github)
  - **Risk:** The files under the shared repository are lost or altered due to unorganized workflow.
  - **Risk Reduction Strategy:** Maintain steady communication on state of branches and code in repository. Announce before pushes and indicate to the group a pull is needed for file updates.
- Group Event
  - **Risk:** A member of the group is not able to complete their assigned task for one of several reasons, such as sickness.
  - **Risk Reduction Strategy:** Each member will communicate their progress and if any issues arise during the project development. If issues arise the group will either assign another member to assist or provide helpful documentation and comments to guide the member.
- Location Authorization and Tracking
  - **Risk:** The user's location is secured and cannot be accessed via a non-published application.
  - **Risk Reduction Strategy:** Swift documentation will be researched thoroughly prior to starting location tracking through the operating system.
- Data Loss
  - **Risk:** The database storing user data loses all information, and we are left with no data to work on or distribute.
  - **Risk Reduction Strategy:** Have a backup of the database that backs up the primary database every 6 hours to ensure no more than a day of data is ever lost.
- Privacy
  - **Risk:** There is a large risk of exposing private data, such as current location and location of frequent locations. Someone may be able to force access to our data which will expose a unique device identifier, and location pings with times.

- **Risk Reduction Strategy:** We will transmit data using requests on secure connections (HTTPS), and the user will not be distinguishable on the map. Therefore if data is accessed by unauthorized individuals, there is little to no harm that may be conducted. To further ensure users can not be found there is a function to shift location when at home.