(App logo still pending)

LLU "Health Hearts at Home" App
Software Project
Management Plan (SPMP)

Version 1.2.1

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1 Overview

1.1 Project Summary

1.1.1 Purpose

The Software Project Management Plan (SPMP) outlines the management of the Congenital Heart Disorder mobile application development for the beginning iterations of the project. It contains the organization, development cycle plans, the timeline, testing guidelines, and the maintenance plan for the application for the later groups. The plans will be inspected by our CEO, Dr. Concepcion, and our client, Vanessa Miller.

1.1.2 Scope of the Project

The scope of this plan is to explain the initial development for the Congenital Heart Disorder application. It will outline what will be done, who will do what and the methods that we have adopted. We have specified in the current SRS that we will be focused on completing:

- Application Development for the iOS version of the application
- Quality Assurance
- Documentation

The first prototype of the project will have the framework for the initial screens of the application. And the second prototype will have a functional Home Page, Track Your Child, Hospital Helpline, and Contacts pages.

1.1.3 Assumptions and Constraints

We will follow these assumptions:

1. All members are following the approved versions of the SRS and SPMP
2. The client will respond to our inquiries.
3. Everyone will attend lab sessions to meet and discuss.
4. Everyone will dedicate time outside of lab to finish their development
5. All deadlines will be met with their tasks.
6. The application will work on the iOS devices.
7. Everyone will contribute and help each other to accomplish our goals.

1.1.4 Schedule and Budget Summary

No budget was given to us for this project. We are expected to deliver a functional Prototype 1 by the 7th week of class. And a final, Prototype 2, on the final day of class.

1.1.5 Project Deliverables

1. SRS, SPMP, SQAP, Software Architecture, Detailed Design, Test Plans, Documented Source Code, and Maintenance Manual.
2. Executable Application running on an iOS platform

1.2 Evolution of the Plan

The Project Manager, Alejandro Avila, met with our client, Vanessa Miller, on January 22, 2018. They discussed what they were wanting for the first development milestone of their application. During this meeting, they established the frame work, concepts, and requirements from us. To establish the base app, meet with our UI/UX team to design an app logo. While we all trained ourselves in the IDE being used for design, XCode.

2 References

- IOS developers

https://developer.apple.com/library/content/referencelibrary/GettingStarted/DevelopiOSAppsSwift/

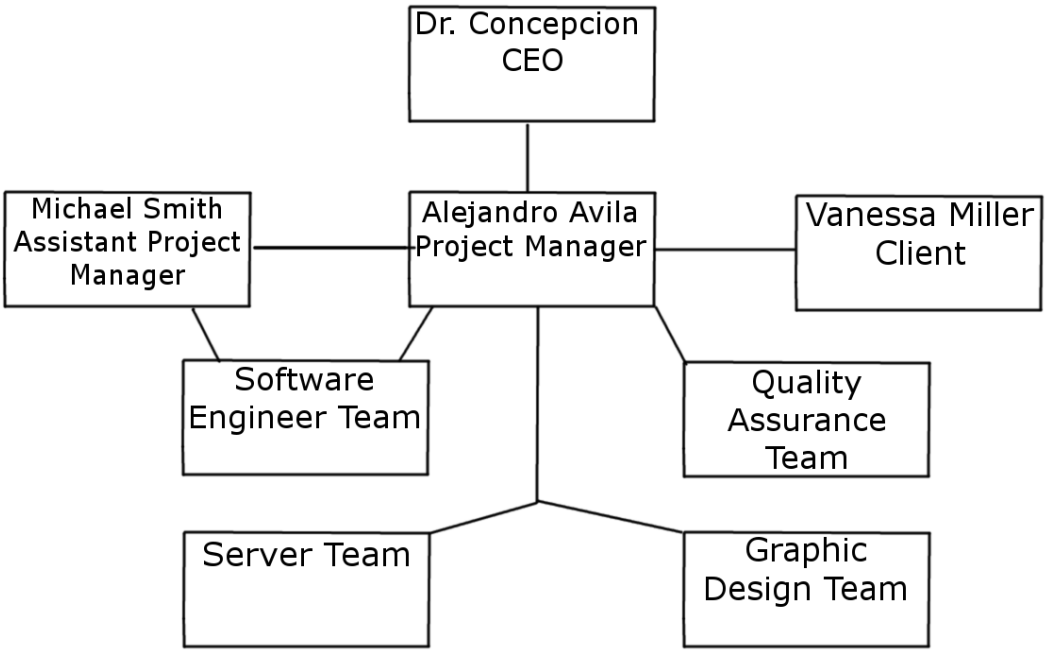
- CSUSB OSMM Software Project Management Plan (SPMP) example.

3 Acronyms and Abbreviations

- IOS – Apple's mobile operating system
- XCode – Apple's IDE for the macOS and IOS applications
- IDE – Integrated Development Environment
- 3G – Third Generation of wireless data standard
- 4G – Fourth Generation of wireless data standard
- MySQL – Database language that interacts with a server to query data
- Swift – Apple's programming language for mobile applications

- HTTPS – Secure transfer protocol for server communication.
- WiFi – Wireless internet for devices
- SRS – Software requirement specifications
- CHD – Congenital Heart Disorder
- SPMP – Software Project Management Plan
- SQAP – Software Quality Assurance Plan

4 Project Organization



4.1 External Interfaces

Dr. Concepcion (CEO) – Monitors performance of all the development teams. Provides guidance to the Project Manager, analyzes and gives advice on documentation and heads the board meetings. As well as emails the managers of each time about important notices or deadlines.

Vanessa Miller (Client) – Conveys her ideas about the app to the project managers. Provides any required documentation or information to the team. Gives feedback on the prototypes. Email is the main form of communication with our Project Manager, Alejandro Avila.

Alejandro Avila (Project Manager) – Connection between the team, CEO, and client. Communicates with the CEO and the client, Vanessa Miller, through email and face to face communications. While meetings with the team, each class and lab session. As well as emailing if communication is needed between class sessions.

Michael Smith (Assistant Project Manager) – Involved in email communication with the client. As well as email and face to face communications with the CEO. Meets with the team each session and checks on their individual development progress.

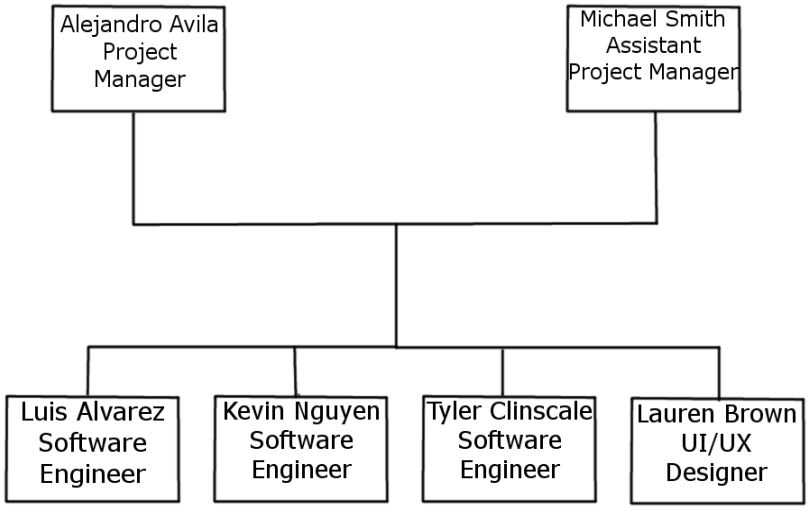
Design Team – Plans the layout and function of the app. Designs the app logo. Reports to the project manager and communicates via email.

Software Engineering Team – Codes the objects and screens for the app. Reports to the assistant project manager. Communication through face to face meetings each class session.

Server Team – Receives the requirement for the development team for the application presentations. Issues the communication ports, provides the server and databases need for the application. Maintains a stable connection to the host application. Communicates with the Project Manager via email.

QA Team – Tests the prototypes for any flaws and gives the results to the development team for debugging or gives approval. Follows the testing guidelines outlined in the SQAP. Communicates with the Project Manager via email.

4.2 Internal Interfaces



The Project Manager and the Assistant Project Manager will work together to observe development and provide assistance to the team to meet project deadlines.

4.3 Roles and Responsibilities

Alejandro Avila (Project Manager) – Connection between the team, CEO, and client. Communicates with the team on the client's ideas, verifies that we stay on track to meet deadlines, and that we are following the outlines stated in the documentation. Works with the design and server team to ensure the correct tools are provided to the software team.

Michael Smith (Assistant Project Manager) – Works alongside and monitors the software engineering team. Provides assistant to the project manager when needed and helps keep the team on track. Produces code for the app as well. Produces the Home Screen for the application

Luis Alvarez – Programmer assigned to implement the Contacts function of the application. Creating the subtrees required to display the information in an organized manner.

Kevin Nguyen – Programmer assigned to implement the Track Your Child function of the application. Creating the subtrees required to display the information in an organized manner. And to store the data entered by the user.

Tyler Clinscales - Programmer assigned to implement the Hospital Helpline function of the application. Creating the subtrees required to display the information in an organized manner.

5 Managerial Process Plan

5.1 Start-up Plan

- Client Specification: Client has specified the requirements for the application
- Technology Research: Research in iOS languages, test servers, database design and development
- Environment Set Up: Development environments have been installed and a server has been provided for testing
- Design Overview: Each team member has been given information about the project requirements and their roles

5.1.1 Estimation Plan

Our term only provides 10 weeks for our team to work on the project. We are expected to deliver two functional prototypes. One by the 7th week of class and a final prototype on the final day of class.

5.1.2 Staffing Plan

Members working on this application were all selected and assigned through the screening survey taken during the first week of the course.

5.1.3 Resource Acquisition Plan

The team will be working in the computer labs of Jack Brown Hall on campus with their personal computers. All work environments have been successfully installed in each member's station to be ready to develop in case they need to finish task at home. Testing for the application will be done with an emulator or their own personal iOS devices. The resource plan will include services from the server team to obtain a test server during the development stages for certain work units of the application. All request will be handled by the management team.

5.1.4 Project Staff Training Plan

All staff will need to study by themselves the tools needed for this project n their own time and resources. Members are encouraged to attend the two weekly meetings to consult with each other and get checked for progress. Team members can also consult any other CSE455 TA's for support if a problem cannot be solved within the group.

5.2 Work Plan

5.2.1 Work Activities

- Graphic Design: Layout, styling navigation (collaboration with graphics team)
- Prototype: Early working build version of application (all team members)
- Documentation: Comments ad documentation for future references (all team members)

5.2.2 Schedule Allocation

2018 CHD

Here's everything on the calendar.

Show upcoming events only

January 22, 2018	• Client Meeting @ LLU
January 26, 2018	• SRS V1.1 due
January 29, 2018	• Prototype #1 Development (begin) • Assign tasks to Team Members
January 31, 2018	• Work on individual Screens
February 2, 2018	• SRS V1.2 due
February 5, 2018	• Work on individual Screens • Check Progress
February 7, 2018	• Work on individual Screens • Check Progress
February 12, 2018 Monday	• Work on individual Screens • Check Progress
February 14, 2018 Wednesday	• Integrate Screens
February 16, 2018 Today	• SPMP due

February 19, 2018	• Build App • Test on IPhone • Check Progress
February 21, 2018	• Test on IPhone
February 23, 2018	• Prototype #1 due
February 26, 2018	• Work on Functions • Check Progress
February 28, 2018	• Work on Functions • Check Progress
March 5, 2018	• Work on Functions • Check Progress
March 7, 2018	• Work on Additional Functions • Check Progress
March 12, 2018	• Build App
March 14, 2018	• Test App on iOS Platform
March 16, 2018	• Push all Work to Repository
March 19, 2018	• Final Prototype Delivery

5.3 Control Plan

5.3.1 Requirements Control Plan

Team members will meet two days of the week to report their progress and status of their assigned work. The client will be updated on the application prototype on a regular basis. In the case of new requirements requested by the client, the managers will assess these requirements and establish a plan to handle the implementation.

5.3.2 Schedule Control Plan

Outside of the two weekly lab meetings, the team will also have irregular meetings if needed in the development of the prototype. These irregular meetings will be held and based on the team's availability. Managers will be in charge of making updates on the schedule should these meetings solidify. Also, managers will be in contact with the team members and designer through communication by email, Basecamp, and Slack.

5.3.3 Quality Control Plan

Quality analysis of the project will be done continuously and incrementally by the project managers. Regular testing will be held at the meetings and submitted to the QA team for checks.

5.3.4 Reporting Plan

Dr. Concepcion will have meetings by demand only. Team members will report their progress bi-weekly during lab hours and maintain constant communication through email, Basecamp, and Slack

5.3.5 Metrics Collection Plan

Each team members' work will be evaluated weekly to ensure the progress for the project is on track for completion by the deadlines listed. This evaluation will be in lines of code per unit time as well as functions per screen completed.

5.4 Risk management Plan

- Development: Additional meetings will be encouraged to workout difficulties in the development and managers will need to record updates to schedule, ensure team is on track, and maintain communication with all contributors
- Server Failure: Server team will be emailed and notified accordingly
- Project Failure: Failure will be assessed and discussed with the client

5.5. Closeout Plan

1. Application exhibit on Finals
2. Deliverables uploaded to repository
3. Submit maintenance manual

6. Technical Process Plans

6.1 Process Model

The team will use a modified Scrum development plan with three core roles to produce the desired prototypes. The roles will ensure everyone has a task and all issues can be resolved accordingly. The three core roles being product owner (client), scrum, and development team.

- Product Client: Vanessa Ayer Miller
- Scrum: Michael Smith, Alejandro Avila
- Development Team: Luis Alvarez, Kevin Nguyen, Tyler Clinscales

Each team member will be assigned a role that comes with specific tasks. It is essential that members go to the lab meetings to determine whether the project is on track and to get checked on progress. Also, during these meetings the managers can communicate with the developers and analyze if hours outside of lab are needed for encounters with issues and problems.

6.2 Methods, Tools, and Techniques

Methods:

- Scrum Software Development

Tools:

- Xcode
- Bitbucket
- Basecamp
- Slack

Techniques:

- Planning Meetings
- Bi-weekly meetings with status reports

6.3 Infrastructure Plan

The server team will provide an Apache Webserver and MySQL in a Linux container, and SFTP access to upload code and documents.

6.4 Product Acceptance Plan

The acceptance will be conducted by the project client as well as by the Quality Assurance team.

- Security Vulnerabilities
- Functional Completeness
- Accessibility
- Response Time

7. Supporting Process Plans

7.1 Configuration Management Plan

Through the Gitlab service provided, the Server Team will provide a git revision control system. All project deliverables will be considered items.

7.2 Verification and validation plan

The app will be verified and validated through several parties and teams. These being the Software Team, Server Team, QA Team, MAD Team, and above all the client. Each to ensure the app is performing at top standard.

7.3 Documentation Plan

Documentation for the SRS and SPMP will be provided by the Project Manager and the Assistant Project Manager. Documentation for design and architecture will be prepared by the development team members and reviewed by the managers.

7.4 Quality Assurance Plan

The managers will perform unit testing for individual screens prior to integration. The QA team will perform acceptance testing for this application post-integration.

7.5 Reviews and Audits

All team members will be part of the review process to limit errors and maximize test sample size for final deliverable. Design and code reviews will be submitted.

7.6 Problem Resolution Plan

Team members are expected to communicate openly regarding the project to address any problems that may arise. Open communication should prevent or minimize issues during development.

7.7 Process Improvement Plan

There are features that require more time and content, which can be implemented in a later stage of development.

8. Additional Plans

Currently there are no additional plans required. Should this change in the upcoming weeks or for Prototype #2 then they will be discussed in this section and thoroughly evaluated.