CSUSB MBA PASSPORT

Software Project Management Plan

Revision 1.1

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1. Overview

1.1 Project summary

1.1.1 Purpose

The purpose of this document is to define the software requirements for the initial release of the **CSUSB Master's of Business Administration (MBA)** mobile application that is being developed by the CSE 455 Software Engineering team at California State University, San Bernardino. The purpose of this APP is to keep students of the program informed and connected. The point of contact is Deborah Grijalva, MBA Graduate Coordinator.

1.1.1.1 Scope

The goal of the CSUSB MBA app is to provide information and guidance to CSUSB students and the public about the MBA program. **The first prototype of the project will have the pages listed in this document designed and developed for Android mobile devices. The second prototype we plan on adding a feature to make appointments with counselors for students.** The applications should be **functional on Android devices** at the end of the quarter. The limitations that this APP in the 1st and 2nd prototypes will be the Passport feature, and any connection to My Coyote.

1.1.2 Assumptions and Constraints

- We make the following assumptions:
- All of the team members are following the approved SRS and SPMP.
- The client will provide timely responses to our inquiries.
- The team members will attend lab meetings.
- Team members will dedicate time outside of class towards the development of the project.
- All the team member will meet scheduled deadlines with their assigned tasks.
- A Development server will be provided with the necessary technologies available.
- The application must be designed to run on android devices.

1.1.3 Project deliverables

SRS, SPMP, SQAP, Software Architecture, Detailed Design, Test Plans, Documented SOurce Code, and Maintenance Manual.

1.1.4 Schedule and budget summary

No budget is given for the project. Regardless, this is what we plan to be available:
Prototype 1 will be delivered on week 7 of class, and Prototype 2 will be delivered on the final day of class.

1.2 Evolution of the plan

The team attended a meeting with the client, Matthew Summerville on January 26, 2016. We discussed what they wanted from us and what was expected to be on the app. Matthew presented what he wanted the app to look like. We also talked about what features we are able to implement. Also, the software engineers are asked to start doing tutorials to be better familiar with the new environment.

2. References

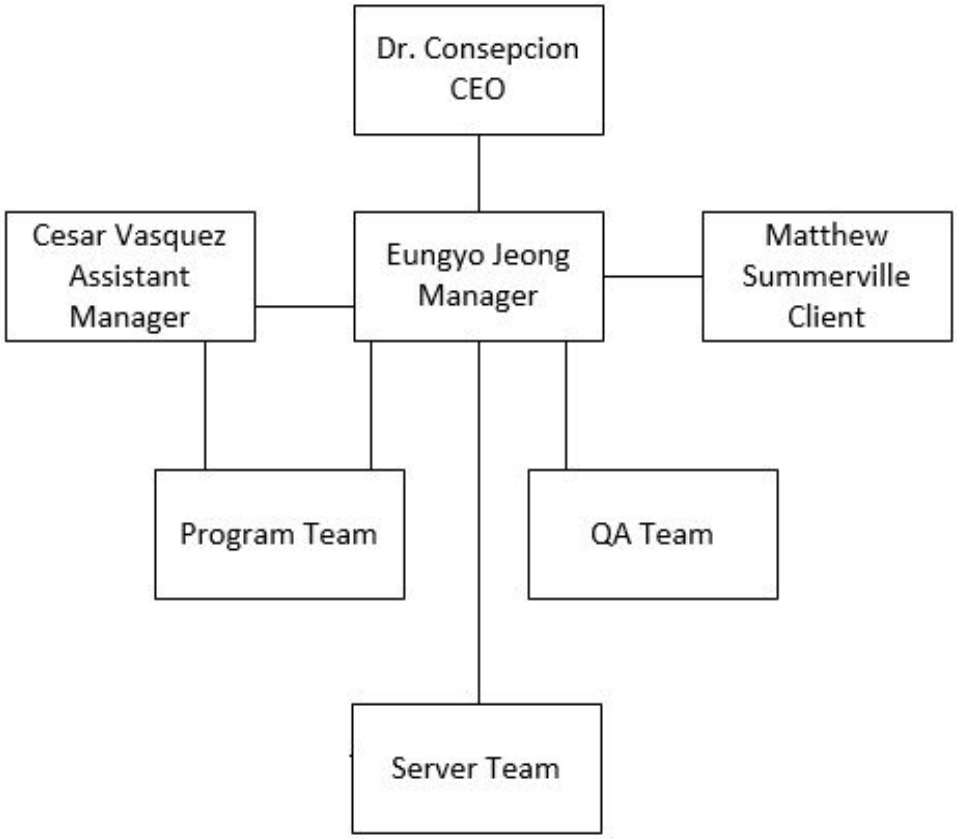
● Android Developers http://developer.android.com
● IEEE SRS Template http://www.cse.msu.edu/~cse870/IEEEXplore-SRS-template.pdf
● CSUSB MBA PASSPORT SPMP Ver 1.0 Example Available upon request

3. Definitions

Android - Google's mobile operating system
Android Studio - Google's IDE for android development
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
Java - The language used for Android development
HTTPS - Secure transfer protocol for server communication
WiFi - Wireless internet for devices
SRS - Software requirement specifications
MBA Passport- Master Business Administration Passport
PFCs - Peer Financial Coaches

4. Project organization

4.1 External interfaces



Dr. Concepcion (CEO) -- Monitors performance of all the development teams. Gives guidance to the project manager, comments on the team's documents, and heads all board meetings where progress reports are given.

Eungyo Jeong (Project Manager) -- Liaison between the team and the client. Produces a work environment where everyone on the team has what they need to do their part as efficiently as possible. Communicates with the client to make sure we have a clear understanding on what is being asked and expected from the development team.

Matthew Summerville (Client) -- Conveys to project manager what the requirements of the app are and gives feedback when prototypes are demonstrated.

Cesar Vasquez (Assistant Project Manager) -- Closely monitors the team's progress, is an integral part in all document preparation, and knows everything about the project. He works directly with the developing team as well as producing code for the App.

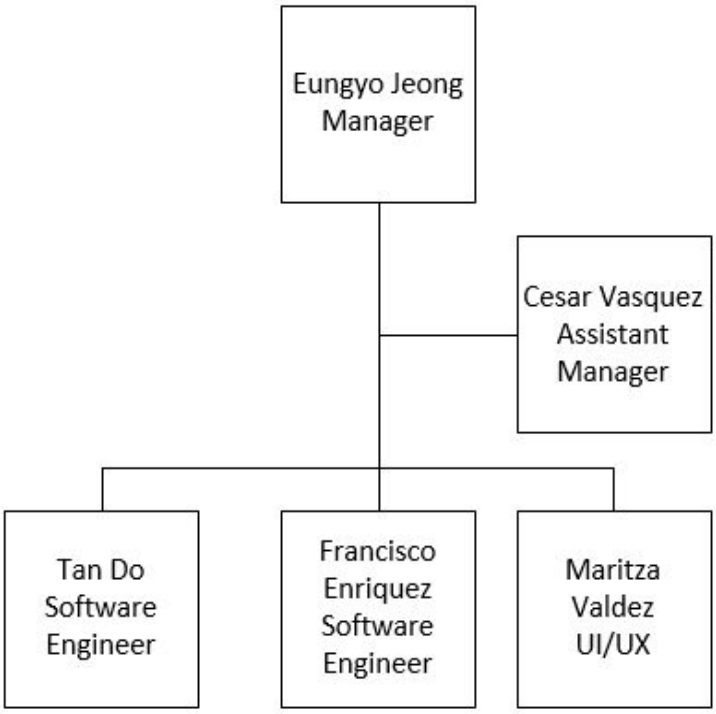
Design Team -- Plans the layout and functions of the app. Reports to the project manager.

Software Engineering Team -- Codes the object in the app. Reports to the assistant project manager.

Server Team -- Receives requirements from development team for presentations to the client. Issues communication ports, provides server and database software on a machine, and maintains a stable environment to host the application.

QA Team -- Test the product for any flaws and gives the results to the development team for debugging or gives their approval.

4.2 Internal structure



The project manager and the assistant project manager will work together commutatively to observe project progress and adapt team member roles to ensure project success.

4.3 Roles and responsibilities

Eungyo Jeong (Project Manager) -- Liaison between the team and the client. Produces a work environment where everyone on the team has what they need to do their part as efficiently as possible. Communicates with the client to make sure we have a clear understanding on what is being asked and expected from the development team.

Cesar Vasquez (Assistant Project Manager) -- Closely monitors the team's progress, is an integral part in all document preparation, and knows everything about the project. He works directly with the developing team as well as producing code for the App.

Tan Do -- Programmer assigned to implement the development of the home page, and other associated pages.

Francisco Enriquez -- Programmer assigned to implement the development of all associated pages.

5. Managerial process plans

5.1 Start-up plan

- Client specification
    - Client has specified the requirements for the application
- Technology research
    - Research in Android development environments, test servers, database design and development, security measures
- Environment set up
    - Development environments have been installed and are running to make sure the application is ready for deployment on Android devices
- Design Overview
    - Each team member has been given information regarding what is asked

5.1.1 Estimation plan

The team will keep developing the application by following the requirements that provided by client, and plan from SRS documentation.

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 on their own personal computers and all work environments have been successfully installed in each member's station to be ready to develop in case they need to finish the task at home. Testing for the application will be done with on their own android device or emulator of an android device.

The resource plan will include services from the server team to obtain a test server during the development stages for certain work units in the application which include a get or post request to a database. We will also continue Student Advising with the student interns. All requests will be handled by project managers.

5.1.4 Project staff training plan

All staff will study by themselves on Android development environment, spending their own time and resources. Resources will include YouTube, Lynda.com, and Codecademy tutorials for both Java and SQL.

Team members will also consult any other CSE 455 TAs for additional support if the problem cannot be solved within the group.

5.2 Work plan

5.2.1 Work activities

Work Units:

- Graphic Design : Layout, styling, navigation
  - Assigned: Maritza Valdez
- Prototype : Early working build version of Application
  - Page Development : Tan Do, Francisco Enriquez
  - Database Development : Cesar Vasquez, Eungyo Jeong
- Documentation: Work on code document for future references.
  - Assigned: All Team members will work on documentation with respect to their assigned work units.

5.2.2 Schedule allocation

Here's everything on the calendar.

Show upcoming events only

January 23, 2017	• Learn Skills needed for creating the app
January 26, 2017	• Preparing 5 Questions Each Person • Appointment with Client at 3:30am
January 29, 2017	• SRS Document
February 1, 2017	• Prototype#1
February 5, 2017 Sunday	• SPMP document By Eungyo and Cesar
February 12, 2017	• SPMP Re-Submission By Eungyo and Cesar
February 14, 2017	• Complete Styling of Each Page By Tan and Francisco
February 15, 2017	• Collaborate on Completed Pages By Tan and Francisco • Testing Prototype #1 By Eungyo and Cesar
February 16, 2017	• Meeting with Client, All team member
February 19, 2017	• Upgrade Pages with Content Provided by Client, All team member • Prototype #1 Delivery
February 21, 2017	• Prototype #2 Development, All team member
February 28, 2017	• Meeting with Client, All team member
March 5, 2017	• Update Pages with Content Provided by Client, All team member
March 6, 2017	• Database and Finance Tool Discussion and Design By Eungyo and Cesar
March 12, 2017	• Database and Finance Tool Development By Tan and Francisco • Prototype #2 Delivery

5.3 Control plan

5.3.1 Requirements control plan

Team members will meet two days of the week to comment on the status of their assigned work during a scrum meeting. The client will be updated on the applications prototype on a weekly basis. In case of new, unimplemented requirements requested by the client, the managers will assess these requirements and establish a plan on how the implementation will be handled during the progress of development.

5.3.2 Schedule control plan

The team will have irregular meetings aside from the lab meetings if needed. If there is a need of such a meeting, managers will make any changes to the schedule based on their availability. Managers will also keep constant communication with team members and a designer to make sure if any changes will be needed as the development continues. Project Manager and Assistant Project Manager will discuss project progress and deadlines on a weekly basis by email.

5.3.3 Quality control plan

Quality of the project will be done continuously on team meetings by project managers and team leader.

The team will also follow a quality metric of:

- # of faults/ K LOC, where we will report team members development process with log record.

5.3.4 Reporting plan

Team members will report by every demand happens during class and lab hours, also constant communication through email and by phone.

5.3.5 Metrics collection plan

Every week the work of each
software engineer will be evaluated to make sure it is on track for completion.
To ensure efficiency, questions will be discussed on Mondays and Wednesdays we
will all have a coding session together to see the team’s progression.

5.4 Risk management plan

Development :

- Additional meetings among team members will be encouraged to work out difficulties during development process to avoid being stuck on one particular part.
- Project managers will need updates by team members to obtain a direction of project and keep an eye on where we are to meet deadlines.
- Project managers will need to plan schedule effectively
- Team members will need to stick to the schedule and have responsibility for the tasks to be done.
- Team members must keep in contact

Server failure:

- Server team will be emailed accordingly

Project Failure:

- Project failure will be assessed and discussed with the client. If the project failure is due to lack of mature technology, an alternate project route will be developed and discussed with the client.

5.5. Closeout plan

- Application exhibit on Finals day.
- Store all deliverable to repository
- Submit Maintenance manual

6. Technical process plans

6.1 Process model

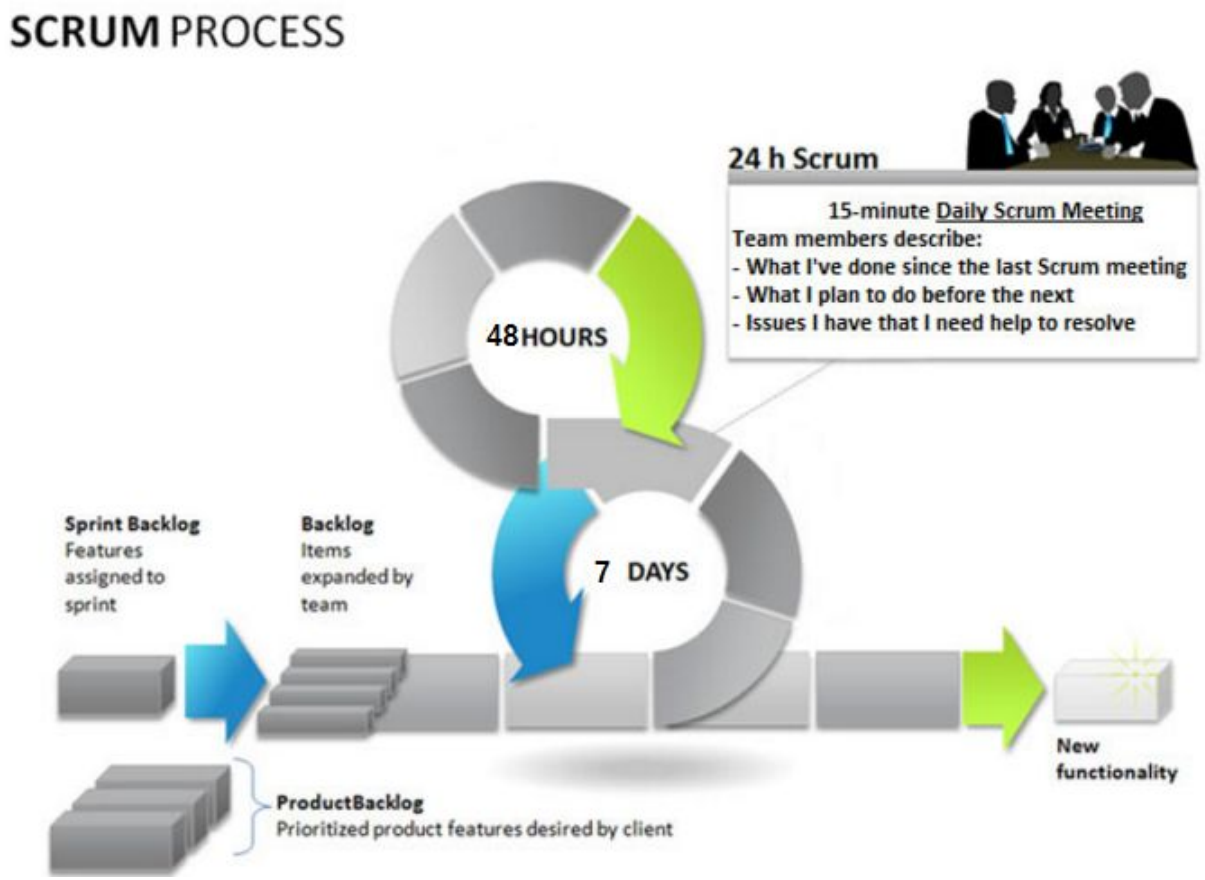
The team will adapt a modified Scrum software development plan with three core roles committed to producing the desired product. This is to ensure everyone knows what their team members are currently working on. Also if they are having issues with development. The three core roles are the product owner, scrum master and the development team.

Product Client : Matthew Summerville

Scrum Master : Eungyo Jeong

Development Team : Cesar Vasquez, Tan Do, Francisco Enriquez

The key to the Scrum development process is that each member will be assigned to work on a specific feature. During the development process is essential that team members attend team meetings so the product owner and scrum master can assess the current status of the project. It is during these meeting that the team can be aware of the direction of the project and reallocate resources to meet deadlines. Team leaders will keep constant communication with team members to determine if meeting after class hours will be required.



6.2 Methods, tools, and techniques

Methods:

- Scrum software development

Techniques:

- Planning Meeting
- Bi-weekly scrum meeting with individual updates
- End Meeting

Tools:

- Android Studio
- Dia
- Github
- Basecamp

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 to entities. The client and the quality assurance team will test the final product.

- Security Vulnerabilities
- Functional completeness
- Accessibility
- Response Time

7. Supporting process plans

7.1 Configuration management plan

The Gitlab service provided by the server team includes a git revision control system. All project deliverables will be considered as configuration items.

7.2 Documentation plan

Documentation for SRS and SPMP will be prepared by the manager and assistant manager. Documentation for Detailed Design and Architecture will be prepared by development team members. Documentation will be reviewed by team leaders.

7.3 Quality assurance plan

The QA team will perform acceptance testing for this application.

7.4 Reviews and audits

Every team member will be part of the review process to maximize the test sample size before the final deliverable date. This is to avoid any errors that may be still be in. Additionally design and code reviews will be submitted.

7.5 Problem resolution plan

Team members are expected to have an open communication regarding project to address any problems they might occur during the development. This also includes deadlines that may produce problems.

7.6 Process improvement plan

There are features that require more resources in time and training that can be implemented in the next stage of development.

The crucial factor to Scrum development is communication and team members need to focus on reporting their updates on a daily basis. Team member will be reminded daily.

8. Additional plans

Annexes