

Team Se7en

Options Family Resource Program Data Management System

Version 2

April 1, 2013

Team 7



Revisions

Version	Primary Author(s)	Description of Version	Date Completed
Draft 01	Steven Liu Tony Chiu	Completion of Progress plan	February 7 2013
Version 2	Steven Liu	Final Version	April 1 2013

Contents

1 INTRODUCTION	4
1.1 OVERVIEW	4
1.2 DELIVERABLES.....	5
1.3 ASSUMPTIONS AND CONSTRAINTS	5
1.4 REFERENCE MATERIALS	6
1.5 DEFINITIONS AND ACRONYMS	6
2 MANAGEMENT STRUCTURE	6
2.1 PROJECT LIFECYCLE	6
2.2 PROJECT ORGANIZATION	7
2.2.1 External Interfaces	7
2.2.2 Internal Structure	7
2.2.2.1 Roles and Responsibilities	7
2.2.2.2 Staffing	8
2.3 COMMUNICATION	9
2.4 RISK AND ASSET MANAGEMENT	9
3 PLANNING AND CONTROL	10
3.1 RESOURCE IDENTIFICATION	10
3.1.1 Staff	10
3.1.2 Time	10
3.1.3 Materials	11
3.2 RESOURCE ALLOCATION	11
3.2.1 Milestones	11
3.2.2 Work Breakdown Structure	12
3.2.3 Schedule	15
3.3 TRACKING AND CONTROL	15
4 SUPPORTING PLANS	15
4.1 CONFIGURATION MANAGEMENT	15
4.2 QUALITY ASSURANCE	15

1 Introduction

1.1 Overview

Purpose

This document is written for these parties with the following intent.

- Options Family B.C Organization.
 - intent: provide a comprehensive document stating all of the features that will be included in the **Options Family Resource Program Data Management System**.
- The software development team from the University of British Columbia's CPSC 319.
 - intent : provide the development team with a guideline of the features that will be delivered in the system's implementation.
- Any developers at Family B.C organization
 - intent: provide brief overview of the system functionality, and requirements, so that developers have general idea of the project.

Scope

Name of the Software Product: **Options Family Resource Program Data Management System**

The software product will perform the following tasks:

- Provide a centralized system for tracking individuals parents who attend programs offered by Options throughout greater Vancouver.
- Track assets such as toys, books, video, and pamphlets that have been given or lent to the customers (parents/guardians) and give staff quick access to information about the assets.
- The system will be hosted on the Microsoft Windows Server 2008 R2 operating system and accessible by client machines

The software product will not perform the following task:

- The coordinator at **Options Family Resource Program** mentioned there is the possibility of tablets, however, this system will not be guaranteed to work on Samsung tablets or any other tablets due to compatibility issues and company policies.

The software's benefits, objectives, and goals:

This project is the Options Family Resource Program Data Management System. The main objective is to facilitate the input of client information into the software system, and be able to track and update the client information. It will also track assets that Family B.C Organization has lent to its clients. It will provide a centralized information system so that the amount of work required

by the staff at Options can be minimized, and manual work by pen and paper can be reduced.

1.2 Deliverables

Software:

- Source code for Options Family Resource Program Data Management System.
- Installation package :
 - Creates the database tables on the server.
 - Configures database for the application.

User Documents:

- Installation README.pdf
 - Instructions on how to install the Options Family Resource Program Database System onto a Windows 2008 R2 Server.
- Database configuration README.pdf
 - Instructions on the database configurations, variables, and fields.
- Software Requirement Specification document
 - List of all the functionalities requirements, software compatibility requirements, user requirements, performance requirements, assumptions and constraints.

Developer Documents:

- System database schema.
- System UML diagrams.

User Documentation:

- A user manual with picture tutorials.

1.3 Assumptions and Constraints

- Assumptions on the client side.
 - Each center uses the same format registration forms, sign in sheet, and library registration.
 - Each center enforces a first and last name sign in policy for everyone.
 - The Client will have a system administrator who is capable of backing up the database when it reaches full capacity.
- Client constraints :
 - Limited to two or three meetings with the client over the course of the project schedule.
- Constraints on the development team.
 - Must use Windows 2008 R2 Server with the following software installed:
 - Microsoft Sequel Server 2008

- Project Schedule no more than fourteen weeks.
- The development team will not responsible for any updates, bug fixes, and feature requests after the software has been delivered to the client.

1.4 Reference Materials

- Refer to team 7's SRS for 3.2.2
- Refer to the Time Table attached at the end for 3.2.3

1.5 Definitions and Acronyms

- OFRPDMS : Options Family Resource Program Data Management System
- Database schema : the database structure blueprint.
- UML Diagrams : Unified Modeling Language diagrams specifies the blueprint of the system.
- SRS - Software Requirement Specification

2 Management Structure

2.1 Project Lifecycle

The project lifecycle our team will be doing is the waterfall model, however for some phases we may work in parallel. For example, while one part of the group is working on completing the requirements gathering phase, one or two team members can start working on the System Design phase because we have most of the functionality requirements. Here is the rough outline of our project lifecycle:

Requirements Gathering Phase (Jan 15 - Feb 12)

- Gather all the system requirements and visit Options Family Resource Center to understand current workflow of their program.
- Software Requirement Specification document completion (Feb 12)

System & Program Design Phase (Jan 20 - Feb 15)

- Database schema completion (Feb 8)
- UML Diagrams completion (Feb 12)
- Database schema / UML Diagrams finalized (Feb 15)

Implementation Phase (Feb 16 - Mar 22)

- Client tracking backend implementation (Mar 1)

- Library tracking backend implementation (Mar 1)
- Client tracking, library tracking, and user authentication unit tests implementation (Mar 12)
- Front end implementation (Mar 22)

Testing Phase (Mar 13 - April 5)

- Unit testing completed (April 5)
- Integration testing completed (April 5)
- User acceptance testing completed (April 5)

*note: We are not doing the operation & maintenance phase because our team will be disbanded as of April 5, 2013

2.2 Project Organization

2.2.1 External Interfaces

If any team member has any uncertainties or questions that need to be addressed by an external interface, they must confront the Communication Manager. The Communication Manager is in charge of contacting these people:

- Katherine MacIntyre: Client
Katherine is the person for whom this application will be built for. She is the person who specifies all of the requirements that will be built in the *OFRPDMS*.
- Deepak Azad: Facilitator
Oversees and evaluates the *OFRPDMS* project; provides suggestions and insight for team 7 during the entire development process.
- Kurt Eiselt: Instructor
Provides guidance, reference and lectures related to software engineering practices for Team 7.

2.2.2 Internal Structure

2.2.2.1 Roles and Responsibilities

Roles	Responsibility
Project Manager	The person who oversees the whole project, makes decisions and resolve disputes
Communication Manager	The person who contacts the facilitator, the instructor and the

	client
Progress Manager	The person who is responsible for keeping track of progress of the project and making sure the team is progressing accordingly with the planned schedule
Minutes Manager	The person who records the meeting discussions and posting it on the website
Configuration Manager	The person who ensures that all the requirements are met during each development phase and the team does not get off track
Research/Training Manager	The person who investigates the skills and technology required for this project
Risks Manager	The person who assess the potential risks that may affect the team and the schedule
Software Version Control Manager	The person who provides the team with version control for the software and documents
Web Master	The person who designs the team's web page

Role	Staff Member	Start Date	End Date
Project Manager	Steven Liu	Jan 2, 2013	April 4, 2013
Communication Manager	Ante Zheng	Jan 2, 2013	April 4, 2013
Progress Manager	Tony Chiu	Jan 2, 2013	April 4, 2013
Minutes Manager	Rufus Zhu	Jan 2, 2013	April 4, 2013
Configuration Manager	Peter Moon	Jan 2, 2013	April 4, 2013
Research/Training Manager	Kevin Lau	Jan 2, 2013	April 4, 2013
Risks Manager	Rufus Zhu	Jan 2, 2013	April 4, 2013
Software Version Control Manager	Steven Liu	Jan 2, 2013	April 4, 2013
Web Master	Tony Chiu	Jan 2, 2013	April 4, 2013

2.3 Communication

- **Team E-mails:** For group announcements, deadlines and reminders. Also to get feedback from client, TA and instructor. E-mails must be checked daily.
- **Google Group:** For online group discussions. No set schedule, this is for informal discussion about the project.
- **Team website:** For the minutes manager to post all the discussions we go through in the weekly meetings. Updated every week
- **Team weekly meetings:** Formal discussion and updates about progress on the project. Every Tuesday at 3-4pm

2.4 Risk and Asset Management

Miscommunication

Probability Of Happening: Low - Medium

Prevention: Have multiple ways of contacting each other. Read E-mails, go to weekly meetings, follow updates on team website. Always clarify with team members if something wasn't clear (don't hesitate to email team members to clarify)

Correction: Realize and identify that miscommunication is a problem and start being aware of what is happening within the team and become involved.

Impact On Project: High

Time Constraint

Probability Of Happening: High

Prevention: Include possibilities such as midterms or assignments when scheduling the plan.

Correction: If a teammate falls short and does not complete a given task, adjust schedule accordingly.

Impact On Project: High

Illness or Absence

Probability Of Happening: Low - Medium

Prevention: Keep everyone up to date with what they are doing. Have everyone share a bit of each other's work.

Correction: If any case of unforeseen emergencies, inform teammates ASAP and get someone to cover for you by getting them up to date with what you are working on

Impact On Project: Low-Medium

Design Error

Probability Of Happening: Medium

Prevention: Critique the design very carefully. Have multiple team members review the design

before implementing the feature.

Correction: When design errors are found, consult with the person who wrote the design. If it is indeed an error, correct it.

Impact On Project: High

Team Conflict

Probability: Low - Medium

Prevention: Always discuss with more than 2 members of the team when making a decision.

Have a group vote

Correction: Let the team leader decide. If the problem still persists, resolve with the TA/Facilitator. If it is a personal issue, resolve with the Instructor.

Impact On Project: High

3 Planning and Control

3.1 Resource Identification

3.1.1 Staff

Staff Profile:

- Steven: Java, SQL, HTML, CSS, Javascript
- Tony: PHP(CakePHP framework), MVC paradigm, drupal, HTML, JQuery, Javascript, AJAX
- Ante: Ruby on Rails, Jersey REST, google app engine
- Rufus
- Peter
- Kevin: Java, C/C++, SQL, Ruby on Rails, computer/network hardware and administration

Staff Allocation:

- Steven : Family sign in
- Rufus: generate report
- Ante: center resources and referrals, routing links
- Tony:
- Peter : Family registration, front end GUI design
- Kevin: Research manager and IT (helps with everyone's problem)

3.1.2 Time

Software package must be completed on April 5, 2013.

3.1.3 Materials

Windows 2008 R2 Server, Microsoft SQL Server 2008, and Visual Studio. These developer software can be obtained from The University of British Columbia's Dreamspark website which is available for students specializing in computer science.

3.2 Resource Allocation

3.2.1 Milestones

Milestone No.	Milestone	Completion Date
001	Extract Client Requirements From First Meeting	January 25
002	Complete second meeting with client	January 26
003	Requirements gathering ends, started on SRS	January 28
004	Rough Draft of SRS due, editing starts	February 1
005	Started on progress report	February 1
006	SRS VR 1 Deadline	February 4
007	Progress report review with team	February 5
008	Setup development environment (Windows 2008 R2 Server and SQL Server)	February 7
009	Progress Report Deadline	February 8
010	SRS VR2 begins	February 8
011	SRS team review	February 10
012	Database Schema editing Completed	February 11
013	SRS VR2 Deadline, UML designing begin	February 12
014	UML designing 80% completed, implementation begins	February 16
015	Database tables created	February 25
016	Database connection implemented	February 25
017	Client tracking implemented	February 25

018	Document design deliverable deadline	February 25
019	Revised Design Document reviewed by team	March 10
020	Revised Design Document Deadline	March 15
021	Library system implemented	March 21
022	All System functions implemented	March 21
023	GUI completed and integrated with backend	March 22
024	User Manual complete	March 31
025	Get ready for presentations	April 1
026	All unit test submitted	April 5
027	Integration test completed	April 5
028	User acceptance completed	April 5
029	Installation script completed	April 5

3.2.2 Work Breakdown Structure

Client meeting breakdown:

- Peter and Rufus: Recording and uploading client responses
- Steven: Asking questions and taking notes
- Ante: Responsible for setting a time with other teams to meet with client
- Kevin: Taking notes
- Tony: Taking notes

Client meeting #2 breakdown:

- Ante, Kevin and Tony: go to Options Family Resource to do a site visit and understand workflow

SRS Task breakdown:

- Peter:
 - section 1
 - first part of section 2
- Steven:
 - section 2
 - section 5
 - table of contents
 - overall editing for spelling and format of the document

- Rufus:
 - section 3
 - section 4
 - printed out SRS document and handed to the TA
- Ante :
 - responsible for section 3.2 and 2.2.
 - sending e-mails to client for clarifications
- Kevin:
 - overall editing for grammar and correctness of requirements
 - oversee the progress and quality of SRS report
- Tony:
 - overall editing
 - oversee the correctness of requirements

Progress Report:

- Tony and Steven: come up with a suitable progress report draft

Software Design Specification:

- Peter:
 - section 1
 - UML diagram
- Kevin:
 - section 2
 - research system environment
 - proofreader
- Tony:
 - Database schema
- Rufus:
 - section 6
- Ante:
- Steven:
 - section 3,4,5
 - UML diagram

Coding:

- Steven:
 - Oversees the progress and quality
 - Family sign in controller and view
 - library items and checkout library items
 - Integration with back end
- Ante:
 - routing functionalities
 - referrals and resources

- Integration with back end
- Rufus:
 - generate report
 - Integration with back end
- Kevin
 - oversees progress
 - research and IT
 - fix bugs
 - library items and checkout library items
- Peter
 - Family Registration
 - Front end GUI designer
- Tony

Testing:

- Steven: Unit testing
- Ante: System and integration testing
- Tony: System and integration testing
- Kevin: Unit testing
- Peter: System and integration testing
- Rufus: System and integration testing

Manuals:

- Steven: User Manual editor
- Ante: User Manual guide
- Rufus:
- Kevin: Database Configuration Read Me File
- Tony: User Manual guide
- Peter:

3.2.3 Schedule

[Refer to the end of the document for attachment]

3.3 Tracking and Control

The project is divided into different phases and at each phase there is a phase leader. The phase leader decides what the tasks are and distributes them to the team members accordingly. The phase leader oversees the cost, progress, functionality, and quality of work. If an issue arises, such as a teammate is having troubles and not completing the task in time, it is reported to the team leader by the phase leader. It is the team leaders' job to act accordingly. At the weekly meeting with the TA, each team member has to report what they have done, how much time it took them and what they will be doing next. The progress manager is responsible for tracking the number of hours worked

4 Supporting Plans

4.1 Configuration Management

The Version Control Manager will be in charge of setting up a private repository from Github, which the team will be using as a version control for documents and source code.

4.2 Quality Assurance

The Configuration Manager will be in charge of meeting the requirements stated by the client and following the deliverable deadlines set by the instructor. Furthermore the phase leaders will be in charge of overall quality and tracking for the phase that they are the leader of. To track and report bugs, we will either have a discussion on the Google Groups (for small bugs) or an in person team meeting (for serious bugs).