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**Software Project Management Plan**

**for**

**Safety Test Organizer**

**Current Software Development**

**4/11/2013**

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| **Version** | **Release Date** | **Responsible Party** | **Major Changes** |
| 0.1 | 4/12/2103 | Muqeet Ahmad | Initial Document Release for Comment |
| 1.0 | 4/16/2013 | Muqeet Ahmad | Document Released for Commenting |
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**Signature**

The following signature indicates approval of the enclosed Software Project Management Plan.

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Client

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Current Software Development Project Manager

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Current Software Development Lead Programmer

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Current Software Development Lead Tester

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Current Software Development Systems Analyst

**Preface**

In the 9th grade of the SMCS program at Poolesville High School, there is a process of being approved for using the tools in the building room. The company, Current Software Development, has received a request from the client, Mr. Curran, to create a program which would simplify the process of all actions regarding safety tests. By combining the review process, the test-taking process, and the revision process into one simple program, the efficiency of managing the safety tests will increase drastically.

This Software Project Management Plan (SPMP) indicates what the plan of the project, that will be performed, is. The purpose of the project, the scope and the objectives are included in this document. This project will be performed by a team composed of highly talented and experienced individuals pertaining to the purposes of their jobs. Furthermore, this SPMP explains managerial process, technical process, and supporting process to be performed and the roles and responsibilities each team member will fulfill.

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**1.0 Introduction**

The project taken, titled Safety Test Organizer, consists of creating a program which will serve the purpose of simplifying the process for taking a safety test. In the program, all of the safety test review sheets will be available and when the teacher wants a safety test taken, all that would have to be done is opening up access to that specific test to the students. Furthermore, the program will simplify the test corrections process as it will include the questions and the review sheet once the person taking the test finishes a specific one. The project will be done in a two-month time frame, with various milestones and progress reports.

**1.1 Project Overview**

The project will be created in series of steps, with the primary objective of this project as creating Java-based software to fulfill the client’s needs and wants. Other minor objectives in this project are getting the user interface working and getting all the documents the client will provide into the program itself. Major milestones in this project include getting working software, importing all the review sheets onto the program, getting the test to display in an appealing manner to the students, and getting the desired format for the client. This project will revolve mainly around the lead programmer and tester, who will follow the project manager’s directions, and create and test a secure safety test giver. Major activities in this project are mainly documenting the work done, getting the requirements from the client, and delivering a working program. The major deliverable in this project is the program that will be finalized when given at the end and the periodical progress reports that will be provided to the client throughout the project, along with the various document pertaining to this project such as the SRS and SPMP. The required resources, which are all already met, are the computers that and the software that will be used to create the program. The only major component relating to budget is the time restraint in which the company has to provide the final program, which is approximately 7 weeks until June.

**1.2 Project Deliverables**

The most important deliverable in this project is the end product of the project, the finalized program. This software will be given to the client on the tentative date in June, and will be provided to the client by his email. Another major deliverables in this project is the periodic progress reports that the client will receive weekly on Fridays through his email, along with the tested drafts of the program that will be provided to the client as soon as each stage is finalized. Minor deliverables include the models showing how the actual program development is doing, which will be sent periodically to the client after each milestone, and the user manual that will be provided to the client when the finalized end product will be sent. All of these deliverables will be created through a collective effort by the company, with the lead programmer and tester specifically dealing with the software based deliverables and the project manager specifically dealing with client related deliverables.

**1.3 Evolution of the Software Project Management Plan**

Over time, this document will be modified as more and more problems will be encountered and mitigated through various means. It is expected that there will be a problem in the access capabilities of the students and the insecurity in the login system of the program. Furthermore, as the program pieces come together, some of the pieces may not fit together perfectly and to mitigate that, modifications will occur.

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| |  |  |  |  | | --- | --- | --- | --- | | **Version** | **Primary Author(s)** | **Description of Version** | **Date Expected** | | Draft | Muqeet Ahmad,  Arun Dilipan | Initial draft created for distribution and review comments | 4/22/2013 | | Preliminary | Yefim Abramson,  Arun Dilipan | Second draft incorporating initial review comments, distributed for final review | 4/29/2013 | | Final | Yefim Abramson,  Muqeet Ahmad,  Arun Dilipan | First complete draft, which is placed under change control | 5/6/2013 | | Revision 1 | Yefim Abramson,  Arun Dilipan | Revised draft, revised according to the change control process and maintained under change control | 5/13/2013 | | Revision 2 | Yefim Abramson, Muqeet Ahmad,  Arun Dilipan | More thoroughly revised draft, revised according to the change control process and maintained under change control | 5/22/2013 | |

**1.4 Reference Materials**

In the creation of this document, the majority of the information came from a client meeting on 4/9/13 with the client, Mr. Curran, himself. Furthermore, more information came from the Poolesville High School’s website and meetings with the various staff members of the school. Furthermore, the SPMP was created off a model given by the company IEEE.

**1.5 Definitions and Acronyms**

SPMP – Software Project Management Plan

SRS – Software Requirements Specification

IEEE – Institute of Electrical and Electronics Engineers

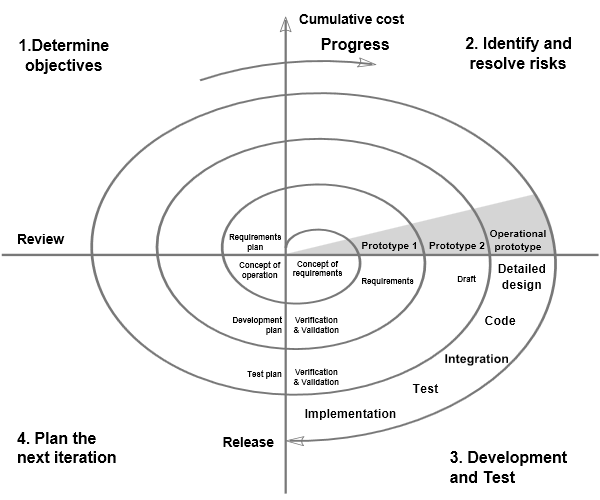
Work Packages – Series of tasks

GUI – Graphic User Interface

## 2.0 Project Organization

**2.1 Process Model**

This project will follow a spiral lifecycle model. The following diagram is a representation of the steps that will be taken in this project.



The iterations will be based on the milestones and there will be a constant review of the phases that have occurred before the current phase.

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Date Due** |
| SPMP and SRS | These are the first two documents that will give the project a direction to go. They include a layout for what actions will be taken and the requirements of the project. | 4/16/2013 |
| Test Questions GUI | This is the first section of the program getting a working Test Taking GUI up which will prevent the test-taker from using other applications during the time the test is open. | TBD |
| Login for the Program | This section of the program deals with getting specific logins for each student who will use the program. | TBD |
| Study Guides and Test Corrections files up | This section deals with getting the test corrections on the program and the study accessible to the students | TBD |
| Sign-Up Working | This section of the program allows the addition of more users into the program | TBD |
| Separate Teacher Login | This section allows the creation of a separate administrator account in which the client will create | TBD |
| Installation | Installing the program into the desired folder of the client and setting up the teacher account for the client | TBD |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Work Product Name** | **Planned Completion Date** | **Placed Under Change Control?** | **Deliverable to Client?** | **People Who Must Sign Off on the Work Product** |
| Software Project Management Plan  This is the controlling document for managing a software project, and it defines the technical and managerial processes necessary to deliver the project requirements. | 4/16/2013 | Yes | Yes | Project Manager, Lead Tester, Lead Programmer, Systems Analyst |
| Software Requirements Specification  This is a document which lists all the requirements given by the client, and how these requirement s will be fulfilled. | 4/16/2013 | Yes | Yes | Project Manager, Lead Tester, Lead Programmer, Systems Analyst |
| Software Design Document  This document will be used to see the structure of the software that will be created for the client. | TBD | Yes | Yes | Project Manager, Lead Tester, Lead Programmer, Systems Analyst |
| Initial Test Plan  This document which gives sample test case scenarios. All of these cases will be tested in order to assure that the program is working | TBD | Yes | No | Project Manager, Lead Tester, Lead Programmer, Systems Analyst |
| TBD | TBD | TBD | TBD | TBD |

### 2.2 Organizational Structure

The management of this project will be shared among the team. Each member of the team is entirely responsible for his part and will have to complete in order to move on to the next phase in the project. The definite leader in this project is the project manager who is responsible to make sure each team member gets their job done on time. Communication within this project will include the communication between the team and communication between the client and the team. Communication between the team will be done through daily meetings and the client will be communicated with through biweekly meetings and weekly emails.

### 2.3 Organizational Boundaries and Interfaces

This project is related to the client corporation, Mr. Curran, as software will be delivered to the client by the scheduled date. The project is also related to Mr. Estep as he is a supervisor in this job and as he provides guidance when necessary. The project manager and systems analyst are responsible for keeping connections with all the affiliated companies.

### 2.4 Project Responsibilities

|  |  |  |
| --- | --- | --- |
| **Name of Company Member** | **Role** | **Responsibilities** |
| Muqeet Ahmad | Project Manger | This member is responsible for delivering the actual software to the client. He is also responsible for keeping the group on schedule as well as providing periodical reports to the client. |
| Yefim Abramson | Lead Tester | This member is responsible for finding faults in the programmer’s work as well as helping perfect the code to achieve the requirements. |
| Arun Dilipan | Lead Programmer | This member is responsible for getting a working program and for making sure the client receives the working program |
| William Gu | Systems Analyst | This member is responsible for getting updates on the client side of the project. This member will have to meet with the client biweekly to get the client preferences and requirements. |

## 3.0 Managerial Process

Management will fall under the responsibility of the project manager, who will document all that needs to be done by the members of the team. Priorities will be determined through the likeliness of each possible risk and the impact of the risk. A Gant chart will be followed in order to achieve the product the client requested.

### 3.1 Management Objectives and Priorities

In this project there are various management processes that will be conducted. The priority of each phase will be getting the imminent phase completed along with getting the preceding phases finalized as each phase is dependent on the one preceding it. Risk management will be done by the project manager through a RIM. Quality will be assured in this project as there will be constant testing at each phase. Throughout this project, the team will constantly be using third-party software such as Eclipse and will use the language JAVA to get all the code.

### 3.2 Assumptions, Dependencies, and Constraints

The project is based on the requirements the client explicitly stated in the first meeting and in the future meetings which will take place. The only major constraint in this project is time as there is only 3 months to fully complete and deliver the project to the client. The project is dependent on the client’s needs and desires as the team is willing to fulfill all that are stated.

### 3.3 Risk Management

Risk will be identified through concerns from the team and will be arranged in a Risk Impact Matrix (RIM). Risks will be monitored through testing by the team and will also be mitigated through solutions generated by the team. The RIM dealing with this project is as follows:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Impact** | | |
| **Likelihood** | **High** | **Medium** | **Low** |
| **Highly Likely** | H | H | M |
| **Medium Likely** | H | M | L |
| **Not Likely** | M | L | L |

|  |  |
| --- | --- |
| Label | Risk Priority |
| H | High Risk |
| M | Medium Risk |
| L | Low Risk |

|  |  |  |
| --- | --- | --- |
| Risk | Risk Priority | Mitigation |
| Program is lost/corrupted | H | Constantly back up the program |
| Team member is absent | M | Contact the team member and update him on the progress |
| Program has mistakes in it | L | Test and correct the program |

More risks will be added to the table above as more risks are thought of throughout the project.

### 3.4 Monitoring and Controlling Mechanisms

The entire project will be managed through a project documentation journal, done by each member of the team. Furthermore, biweekly meetings will be held with the client and the client will get updated weekly by the project manager.

### 3.5 Staffing Plan

The roles and responsibilities of each team member is listed in section 2.4. These four members make up the team and are each highly qualified in their roles as they have prepared for these positions for over 1 year. The project will be completed in no more than 3 months and each member will play a key role in the project itself. More detailed start times and tasks are listed in the Gant chart in sections 5.4.

## 4.0 Technical Process

### 4.1 Methods, Tools, and Techniques

The program will be written up in Eclipse, a Java Development Kit (JDK), and will be tested in the same software. Computers will be used to run the JDK and the JDK has a debugger which will be utilized to edit and fix problems in the program. Quality and schedule maintenance will be assured through the use of a Gant chart and through constantly testing that the program is working.

### 4.2 Software Documentation

Document which that will be developed throughout this project include:

* SRS
* SPMP
* SDD
* Client and Team Approval Waiver
* Coding Standard
* User Manual
* Quality Assurance Plan
* Delivery and Installation Plan
* Project Documentation
* Software API

### 4.3 Project Support Functions

Other documents which refer to this project are the SRS and the SDD. The SRS will be completed alongside the SPMP as both are needed to guide this project. The SDD will be given later when it is completed as the project has not entered that specific phase yet.

## 5.0 Work Packages, Schedule, and Budget

### 5.1 Work Packages

### In this project, the final product will be built through various phases. The phases chronologically go through the general account phase, which is the creation of the student id login, the student test, which includes getting the test working and recording the results of the test, study guides and corrections phase, which includes getting all of the study guides and test corrections worksheets in the program, admin account phase, which includes getting a separate admin account working, and the installation phase, which includes getting the program in the clients possessions.

### 5.2 Dependencies

This project is mainly dependent on the meetings with the clients. Whenever the client wants to add another feature to the program, the team will try to fulfill the new needs. The phases of the project are dependent on one another, specifically; the test, study guides, and test corrections are dependent on the general account login. Furthermore, without the general account login working, the administrator account cannot be created. Otherwise, all of the other works packages fall into place.

### 5.3 Resource Requirements

The main limited resource in this project is the time limit the team has been given. The main personnel in this project are the lead programmer and the lead tester. Both the programmer and tester will utilize computers and Eclipse to create the working program.

### 5.4 Schedule

The schedule will be maintained through the use of a Gant Chart, in which each team member will have his jobs listed and the time period to finish the job.

## 6.0 Additional Components

## The installation of the project will be done through a compact disk format where the administrator account will be created. The program on the disk will aid the user to set the program’s directories and in a step-by-step format, help the client get a working program.

## 7.0 Appendices