Software Project Management Plan (SPMP)

Learning Management System Project

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**1. Introduction**  
This project is a learning management system and should be able to work for both a student and an instructor. It is supposed to mimic blackboard in providing both an instructor and student to navigate grades, see classes, and assignments. It tracks the student’s basic information such as student’s name, student’s ID, student’s registered courses in the current semester, exam’s score in a course, and GPA calculation in the current semester. The administrator manages the student information management system and can insert/update any of the student’s information. The user can only log in to the system and view their information.

**1.1 Project Overview**

This project is supposed to be able to run efficiently and include information such as student’s name, student’s ID, courses enrolled, exam scores, and GPA calculations. Apart from this information it should also be able to add, delete, insert, and modify records.

**1.2 Project Deliverables**

An engaging and functional LMS. Students and administrators will be able to access and use the basic LMS. The complete product including all documentation will be delivered by the 25th of April 2019.

**1.3 Evolution of the SPMP**

This plan will be completed by dividing the work between all group members. The team leader, Corey, and team manager, Vernon, will assign each group member a task to complete. We will all show our progress to the group and submit what we have through GitHub. For any updates the team leader and team manager will look at them and decide what changes need to be made.

**1.4 Reference Materials**

The project will reference a learning management system.

**1.5 Definitions and Acronyms**

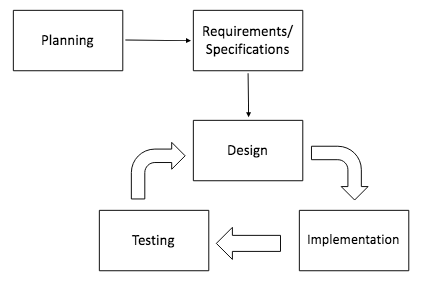
LMS - Learning Management System

**2. Project Organization**

This section specifies the process model for the project and its organizational structure.

**2.1 Process Model**

The project will start by planning out what we want to do. Then we will understand and elicit the requirements/specifications. Once we understand the requirements/specifications, the team will enter an iterative cycle during the design, implementation, and testing phases to ensure that all functionalities are correctly implemented.



**2.2 Organizational Structure**

The responsibilities are separated by chief programmer, Corey, for backup programmer, Vernon, and for programmers we have Alexis, Norma and Rohan.

|  |  |
| --- | --- |
| Name | Role & Responsibilities |
| Corey | Team Leader – Chief programmer, assign programming duties to the team, ensures the project’s code and GUI consider all the factors. |
| Vernon | Team Manager – Ensure the team finishes all assignment before deadlines, keep track of the work, oversee the work the team produces, backup programmer. |
| Alexis | Programmer/Secretary - manage documentation and help the team leader with programming. |
| Norma | Programmer/Secretary - manage documentation and help the team leader with programming. |
| Rohan | Programmer/Secretary - manage documentation and help the team leader with programming. |

**2.3 Project Responsibilities**

The project responsibilities are split into the requirements needed. Cory and Vernon oversee the Java coding. Alexis and Norma oversee HTML for the visuals and SPMP document. Rohan oversees the CRC cards.

|  |  |
| --- | --- |
| Project Phase | Phase Lead |
| Planning Phase | The whole team - will be collaborating ideas and developing a plan. We will gather requirements and document the plan. |
| Analysis Phase | Corey, Vernon – As the team leaders they have a better understanding how to explain the requirement and give out tasks to the rest of the team members. |
| Design Phase | Corey – leads the team in creating a design that ensure all requirements. |
| Development Phase | Corey – leads the team into developing a usable system. |
| Testing Phase | The whole team – Make sure all that all parts of the system is integrated and is thoroughly tested. |
| Documentation | Alexis, Norma, Rohan – We document all the work and manage it. |

**3. Managerial Process**  
This section of the SPMP specifies the management process for this project.

**3.1 Management Objectives and Priorities**

The ultimate goal of this project is to be able to be a management system for schools to use. It is supposed to have both administration and students be able to check their grades or update them. The main priorities are to have a confidential login system and an interactive one.

**3.2 Assumptions, Dependencies, and Constraints**

The constraints are as followed:

* Deadline must be met
* Project must be done in less than five months
* Availability of each team member
* The product must reflect a Learning Management System
* It must be a closed source system
* The product should be easily usable to users
* The product should have an administrative and student option
* Some of the team members don’t know that much java and had to learn the language to be able to understand and work on the code
* Keeping the scope under control

Some assumptions would be:

* We can assume that every person in the team will do 20% of the work
* We will have half the work done by week 7

**3.3 Risk Management**

The risk factors associated with the project are as follows.

There is a strict criteria and plan that must be met but no specific instructions to how the project wants to be presented. Some risks throughout the project were team member unavailability, not all team members know language being used, changes with the user interface, and some missed deadlines. The biggest risk factor we encountered was getting the back-end program to run with the HTML written by different programmers. The biggest risk we would face is trying to get everything to flow correctly when different parts are written by different programmers. If HTML does not work for the java code written, then we would need to use Java Swing for it. This will cause a problem with time and how long we would need to accomplish and have this done by the due date. Since this project will not reference or use another code as reference, we will also need to test it multiple times along the way to make sure the foundation is strong. It is vital that we conduct different tests as we are writing it to make sure that everything runs smoothly, and nothing is off.

**3.4 Monitoring and Controlling Mechanisms**

All the monitoring will be done through the chief programmer. All the information and process that is done will be shown to give during class or will be posted on GitHub for the other group members to look over and give feedback on.

**3.5 Staffing Approach**

The skills required for this project would be mainly HTML and java.

**4. Technical Process**

The technical process specifies the methods that the team will use in representing the technical details of the project. It outlines how the team will document the technical details during project development. Also, the tools and techniques will be specified.

**4.1 Methods, Tools, and Techniques**

Diagrams:

* UML Diagrams were used by our team to represent the data, relationships, and requirements.
* Use Cases were used to identify “actors” of the system and how they interact with the system.
* CRC Cards were used to show how the classes interact with one another.

Programming Languages and Tools:

* Our team will be using Java, Java Swing, and HTML.

**4.2 Software Documentation**

Software Project Management Plan (SPMP): An outline of how our project will be done. This specifies our documentation plan for this project. We will have an initial draft where the team will plan out an outline how we would want the project to be. State any major sections and collaborate ideas with one another. The rough draft would be more specific than the initial draft and would elaborate more on the development of the project. Final draft would add any additional information and will be revised by all team mates. Final copy would be sent to the professor (including the whole project) for final grading.

Software Requirements Specification (SRS): The application should be able to keep track of three different types of users. The first type of user, in this case students, can sign in and only view their information. While the other types of users, professors, can view and edit student's information. Administrators should be able to edit both professors and student's information. Each of these requirements can be validated by both professors and students. Information entered by the professor for a student shouldn’t change unless the professor changes it, and it should be viewable by both the professor and student. The administrator should be able to change the access that each user has.

**5. Schedule**

**5.1 Resource Requirements**

Outside resources that are required would be NetBeans Java, Atom for HTML coding. Outside class time will be required to complete all the necessary material that is required of each member.

**5.2 Resource Allocation**

For resource allocation the three programmers will do their part and turn in their work to the chief programmer. The chief programmer will ensure that their code and resources are all met before moving on with the project. We will also all divide any writing requirements between each other and submit to chief programmer before anything is submitted.

**5.3 Schedule**

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| --- | --- |
| Week 1 (Feb 3-9) | Assign roles to all group members and make sure everyone understands what they need to do |
| Week 2 (Feb 10- 16) | Chief programmer checks in on everyone to make sure they have started on their part and are on the right track |
| Week 3 (Feb 17-23) | Norma will start working on SPMP outline, Rohan on CRC cards, Alexis on research, Vernon will research on what to do for GUI, and Corey will look over the code written so far and give feedback |
| Week 4 (Feb 24- March 2) | We all will show the progress made on the assignments given prior to that |
| Week 5 (March 3- 9) | Continue working on what is required and put any finishing touches on it |
| Week 6 (March 10-16) | Make sure we have the presentation ready to show our progress so far and understand what we need to talk about |
| Week 7 (March 17-23) | Present to the class what we have so far and what we need to do in the future |
| Week 8 (March 24-30) | Start working on the GUI for the code (leaning towards HTML) |
| Week 9 (March 31- Apr 6) | Submit all paper work to chief programmer/ edit the other group members work/ continue testing out code |
| Week 10 (April 7-13) | Finish with all the paperwork required for the project |
| Week 11 (April 14-20) | Meet with group to make sure everything is done and complete ready to present and turn in, make any finishing touches if necessary |
| Week 12 (April 21-27) | Put all resources, artifacts, and documentation ready to present |