

Software Project Management Plan for “Online Library Management System”

1. Introduction

In the project, a system has to be designed to support library management system. The software application to be made consists of at least three main functions, which must interact using the internet. The application may involve the basic e-commerce activities, such as members' login, browsing, issuing and reserving books. The entire system has to be developed (in JAVA) in a way that it is easy to maintain and extend.

I. Project Overview

This project is to create a prototype of library management system. It is an online application like a virtual library on the Internet where customers can borrow books and as well as read books with interest. The customer can create their own user id for accessing this system frequently. The customer will be asked to fill payment information of fine for late returning the books such as credit card number. A notification is sent to the customer's email as soon as the transaction will be done and every time notification will be sent to the users after a successful reserving of a book.

II. Project Deliverables

1. Preliminary Project Plan	23.08.2023
2. Requirements Specification	07.09.2023
3. Analysis [Object model, Dynamic model, and User interface]	07.10.2023
4. Architecture Specification	06.11.2023
5. Component/Object Specification	26.11.2023
6. Source Code	27.10.2023 - 05.01.2024
7. Test Plan	06.01.2024 - 27.01.2024
8. Final Product Demo	28.01.2024 - 04.02.2024

III. Evolution of this document

This document will be updated as the project progresses. Updates should be expected in the following sections:

- i. **References** - updated as necessary.
- ii. **Definitions, acronyms, and abbreviations** - updated as necessary.
- iii. **Organizational Structure** will be updated as the team leaders are assigned for each phase.
- iv. **Technical Process** - this section will be revised appropriately as the requirements and design decisions become clearer.

- v. **Schedule** – as the project progresses, the schedule will be updated accordingly.

Revision History

Revision	Date	Updated By	Update Comments
0.1	12.09.2023	Arkaprati Ghosh	First Draft
0.2	20.09.2023	Arkaprati Ghosh	Second Draft/Final Draft

IV. References

- i. Team Website
<http://www.wis.win.tue.nl/2M390/projects/spingrid/spmp.pdf>
- ii. Project Scope
<http://www.wis.win.tue.nl/2M390/projects/spingrid/spmp.pdf>
- iii. Case Studies
 - <http://allrecipes.com/recipe/10926/cake-mix-cookies-iv/>
 - <http://www.costco.com/cakes-cookies.html>
 - <http://www.cakescookiesandcraftshop.co.uk/>

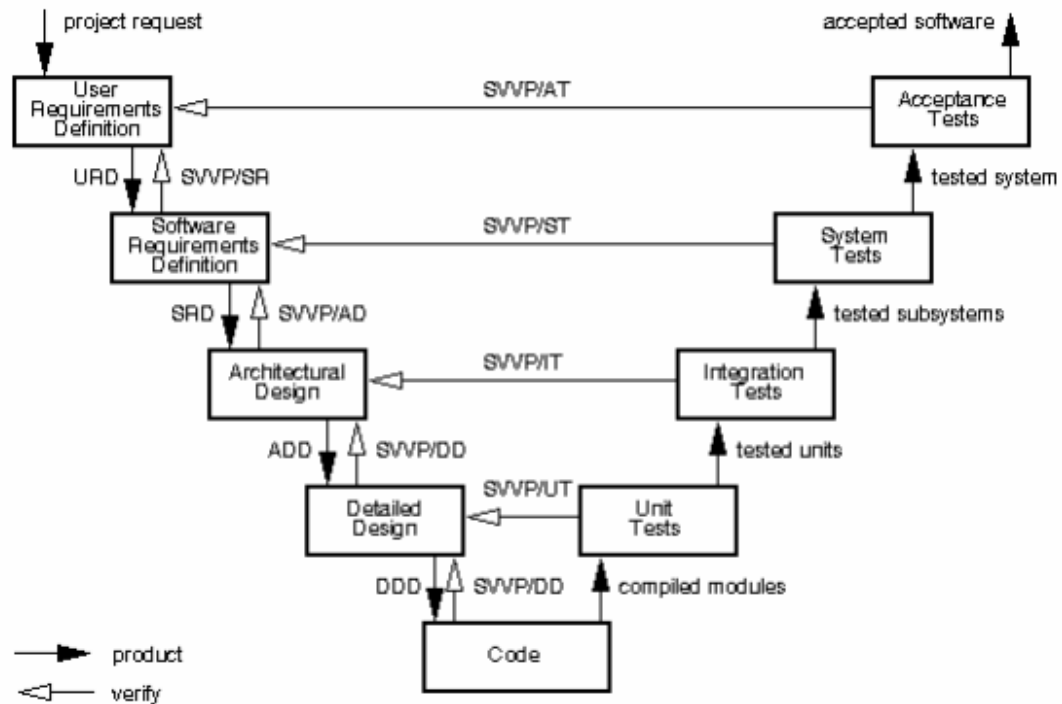
V. Definitions, Acronyms, and Abbreviations

- I. SRS: Software Requirements Specification
- II. API: Application Programming Interface
- III. UI: User Interface
- IV. UX: User Experience
- V. GUI: Graphical User Interface
- VI. SQL: Structured Query Language
- VII. DBMS: Database Management System
- VIII. HTTP: Hypertext Transfer Protocol
- IX. HTTPS: Hypertext Transfer Protocol Secure
- X. URL: Uniform Resource Locator

2. Project Organization

I. Process Model

The process used for this project will be a V-model such that each stage of the model allows us to do testing after completing a phases. Referring to the diagram below, each phase is tested after completion.



II. Organizational Structure

Team Members –

- i. Arkapratim Ghosh
- ii. Bipin Pal

Name	Organization/ Position	Contact Information
Arkapratim Ghosh	ITech Project Manager	arkapratimghosh1264@@gmail.com 9330450430

Days	Deliverable	Team Leader	Deliverable Description
15	1	Arkapratim Ghosh	Project Plan
20	2	Bipin pal	Requirements Specification
30	3	Bipin pal	Analysis
30	4	Bipin pal	Architecture Specification
20	5	Arkapratim Ghosh	Component/Object Specification
40	6	Arkapratim Ghosh	Source Code

22	7	Bipin pal	Test Plan
8	8	Arkapratim Ghosh	Final Deliverable

III. Organizational Boundaries and Interfaces

Team leaders throughout each development of the phases will be responsible for coordinating team meetings, updates, communications, and team deliverables.

IV. Project Responsibilities

For the most vital responsibilities per phase of each team members, please refer to segment 2.2. Ultimately the project team is responsible for the successful delivery of the product. The team member tasks per deliverable according to expertise and the phases are as given below:

1. Project Plan – Whole Team
2. Requirements Specification – TBD
3. Analysis – TBD
4. Architecture Specification – TBD
5. Component/Object Specification – TBD
6. Source Code – TBD
7. Test Plan – TBD
8. Final Deliverable – Entire Team

Name	Organization/ Position	Role/Responsibilities
Arkapratim Ghosh	ITech Project Manager	<ul style="list-style-type: none"> Managing and leading the project team. Developing and maintaining a detailed project plan. Monitoring project progress and performance. Managing project evaluation and dissemination activities. Develop corrective actions when necessary.
		<ul style="list-style-type: none"> Prepare reports on project plans, status, progress, risks, deadlines and resource requirements.

Bipin pal	ITech Business Analyst	<ul style="list-style-type: none"> ● Develop and perform work flow analysis to find out the difficulties in reaching goals. ● Provide project cost estimates.
Bipin Pal	ITech Designer	<ul style="list-style-type: none"> ● Propose effective design solutions to meet project goals. ● Prepare design layouts and sketches according to company design standards. ● Keeping of records and files.
Bipin pal	ITech Staff	<ul style="list-style-type: none"> ● Documentation of daily activities. ● Making kick-off meeting reports. ● In-charge of materials needed for team building activities.

3. Managerial Process

I. Management Objectives and Priorities

The management objective is to deliver the product in time and of high quality. The PM and QAM work together to achieve this by respectively checking that progress is made as planned and monitoring the quality of the product at various stages.

II. Assumptions, Dependencies, and Constraints

In this project plan, a number of factors are taken into account. The following list shows the way milestones on various project phases have been scheduled:

- The team budget of 2 people's x 365 hours = 730 hours
- The project deadline of February 28th.
- The final presentation is on February 28th.

- The peer evaluation deadline is on February 27th.
- Other days the weekends holiday is closed (August 27th, September 3rd, September 10th, September 17th, September 24th, October 1st, October 8th, October 15th, October 22nd).

NOTE: Due to the deadline of 25th October 2023, running out of time will have its reflection on the product, and not on the duration of the project. By assigning a priority to every user requirement, a selection can be made of user requirements that may be dropped out if time runs out.

III. Risk Management

This section mentions any potential risks for the project. Also, schedules or methods are defined to prevent or to reduce the risks as below:

- i. Technology risk
- ii. People risk
- iii. Financial risk
- iv. Market risk
- v. Structure/process risk

The following are the possible risks to be encountered during the development of the project and how they can be prevented.

1. Miscommunication

Prevention: Team members should not hesitate to ask and re-ask questions if things are unclear. Team members should have a written copy of the tasks assigned to them every meeting.

Correction: When it becomes clear that miscommunication is causing problems, the team members should gather in a meeting to clear things up.

2. Time shortage

Prevention: Care is taken to plan enough spare time.

Correction: When tasks fail to be finished in time or when they are finished earlier than planned the project planning is adjusted

3. Illness or absence of team members

Prevention: Team members should warn their team leader or the PM timely before a planned period of absence.

Correction: Work can be taken over quickly by someone else or be distributed among the team members if a person gets ill.

Monitoring and Controlling Mechanisms:

The monitoring of progress is done by the PM using the following means:

Project Kick-off Meetings

The project group meetings take place within the class room or through chat. These meetings are meant to inform each other of the progress made on various tasks and to assign new tasks.

Progress Report

Progress report is done every Friday. This is meant to inform and show the progress in the development of the project and how things are going.

IV. Monitoring and Controlling Mechanisms

The monitoring of progress is done by the PM using the following means:

- i. Weekly project status meetings
- ii. Shared document repository
- iii. Project tracking by MS project plan
- iv. Tracking utilizing baselines in MS project

4. Technical Process

I. Methods, Tools, and Techniques

The project will be implemented utilizing V-model methodology, and tools such as Dreamweaver, Microsoft Project, Star UML, Java, MySQL, QTP, and Load Runner will be utilized. The risks for each category are listed to complete the project successfully. For each risk, a description, a probability of occurrence, the associated action and the impact of the risk are given.

II. Software Documentation

Documentation such as Project Charter, Business Requirement Document, Functional Specification document, Cost Benefit Analysis, Technical Specification document, Detail Design Document, Test Plan, Implementation Plan, Detailed Project Report, and Benefit Realization document.

III. Project Support Functions

All project support documents will be completed in applicable phases.

















5. Work Elements, Schedule, and Budget

- I.** The project is accounted for project resources, technologies and tools required to whole analysis, implementation, and test of the application.
- II.** The project lead will be rotated for each phase within 2 team members.
- III.** The document for all phases will be revised in subsequent phases if applicable.

Budget and Resource Allocation

Salary	3,00,000.00
Office Operations/Supplies/Equipment/Consumables	40,000.00
Miscellaneous	<u>10,000.00</u>
Total	Rs. 3,50,000.00

Schedule

	Task Mode ▾	Task Name ▾	Duration ▾	Start ▾	Finish ▾
		Identify the company	4 days	Sun 20-08-23	Wed 23-08-23
		Conceptualize the project	1 day	Thu 24-08-23	Thu 24-08-23
		Establish the vision, mission, objectives	3 days	Fri 25-08-23	Tue 29-08-23
		Identify the scope of the project	1 day	Wed 30-08-23	Wed 30-08-23
		Develop Preliminary schedules and cost estimates	1 day	Thu 31-08-23	Thu 31-08-23
		Create project charter	1 day	Fri 01-09-23	Fri 01-09-23
		Develop business case for the project	1 day	Mon 04-09-23	Mon 04-09-23
		Select Development tools	2 days	Tue 05-09-23	Wed 06-09-23
		Identify Customer needs	3 days	Thu 07-09-23	Mon 11-09-23
		Establish target specifications	2 days	Tue 12-09-23	Wed 13-09-23
		Generate product concepts	2 days	Thu 14-09-23	Fri 15-09-23
		Refine product specifications	2 days	Mon 18-09-23	Tue 19-09-23
		Plan the remaining development project	1 day	Wed 20-09-23	Wed 20-09-23
		Detail design	4 days	Thu 21-09-23	Tue 26-09-23
		3D modelling	5 days	Wed 27-09-23	Tue 03-10-23