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Book Lovers
Software Development Plan (Small Project)
Version <2.0>

Book Lovers	Version: <2.0>
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Revision History

Date	Version	Description	Author
23/10/23	1.0	Initial ideas - PA0	Group 11
25/10.23	2.0	Finalize ideas - PA1	Group 11

Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

Table of Contents

1. Introduction

1.1 Purpose 4

1.2 Scope 4

1.3 Overview 4

2. Project Overview 4

2.1 Project Purpose, Scope, and Objectives 4

2.2 Assumptions and Constraints 4

2.3 Project Deliverables 5

3. Project Organization 5

3.1 Organizational Structure 5

3.2 Roles and Responsibilities 5

4. Management Process 5

4.1 Project Estimates 5

4.2 Project Plan 5

4.2.1 Phase Plan 5

4.2.2 Iteration Objectives 6

4.2.3 Releases 6

4.2.4 Project Schedule 6

4.2.5 Project Resourcing 6

4.3 Project Monitoring and Control 6

4.3.1 Requirements Management 6

4.3.2 Reporting and Measurement 7

4.3.3 Risk Management 7

4.3.4 Configuration Management 7

Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

Software Development Plan (Small Project)

1. Introduction

1.1 Purpose

The purpose of this Software Development Plan is to provide a comprehensive blueprint for the development of a sophisticated online platform designed for book enthusiasts, facilitating seamless book sharing, buying, selling, and renting activities. The plan serves as a pivotal document essential for controlling and guiding the entire project.

The following people use the *Software Development Plan*:

- The **project manager** uses it to plan the project schedule and resource needs, and to track progress against the schedule.
- **Project team members** use it to understand what they need to do, when they need to do it, and what other activities they are dependent upon.

1.2 Scope

This *Software Development Plan* describes the overall plan to be used by the Book Lover project, including deployment of the product. The details of the individual iterations will be described in the Iteration Plans. The plans as outlined in this document are based upon the product requirements as defined in the *Vision Document*.

1.3 Overview

This *Software Development Plan* contains the following information:

Project Overview — provides a description of the project's purpose, scope, and objectives. It also defines the deliverables that the project is expected to deliver.

Project Organization — describes the organizational structure of the project team.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

This software project aims to create a user-friendly and secure web platform dedicated to book-related activities. Users will have the ability to share their books with others, buy new or used books, sell their own books, and even rent titles. The platform's purpose is to foster a vibrant community of readers while providing a convenient and efficient marketplace for book transactions. The final product will be mobile application that contains the features as defined in the Vision document

2.2 Assumptions and Constraints

The assumptions and constraints are detailed in the Vision document.

Some of the information :

- The project has a completion time of 12 weeks.
- Funding in the initial phase of the project is zero.
- The project consists of 5 members and no more members will be added to the project.
- The project will be done on web platform and use mongoDB as a storage system.

2.3 Project Deliverables

- A fundamental web app has horizontal bar, body, company information (name, address, contacts) at the end page.
- Overall view of database structure diagram.

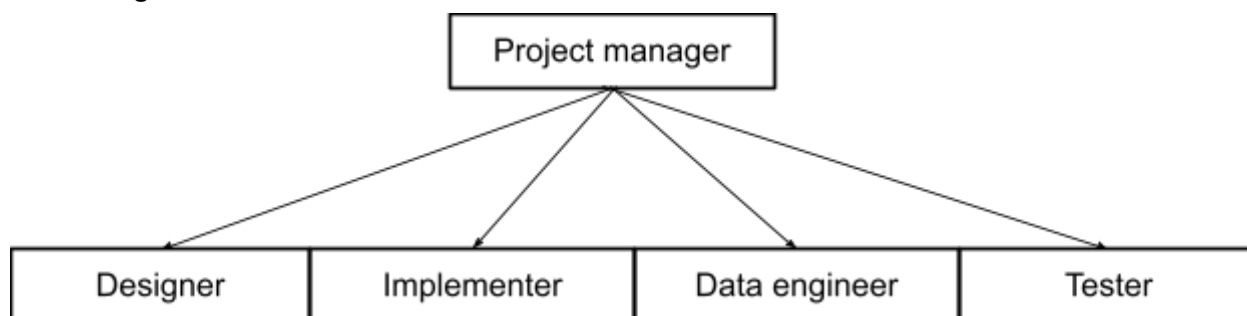
Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

- Set web-app link (domain)
- Design web-app brand logo
- Find out a service provider to hiring host and domain
- Draw database: account, personal private information (to identifying), book information, historic exchange, historic transaction
- Writing policies, rules for web documents, contents

3. Study tools, environments and languages for front-end, back-end, database

Project Organization

3.1 Organizational Structure



3.2 Roles and Responsibilities

Role	Responsibilities
Project manager	Decide all the decisions in the team. The Project Manager is responsible for resource allocation, priority setting, and coordinating interactions with customers and users to maintain the team's focus on the right goal. They also establish practices to ensure the integrity and quality of project artifacts.
Designer	Design the UI/UX for the web application. Ensure that the web interface is user-friendly and the transitions is smooth.
Implementer	Code implementation that process users' function. Ensure all the parameters that transmitted and received are accurate.
Data engineer	Create database to contains data about user accounts and books securely
Tester	The Tester's role involves carrying out tests, which includes setting up and executing tests, evaluating the results and recovery from errors, assessing the outcomes, and logging any identified defects.

Member	Role
Võ Thanh Hiệp	Leader, Project manager, Implementer, Tester
Tăng Đức Phong	Implementer, Data engineer, Tester
Hoàng Xuân Khôi	Designer, Implementer, Tester

Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

Hoàng Đức Kiên	Implementer, Data engineer, Tester
Nguyễn Cao Sơn	Designer, Implementer, Tester

4. Management Process

4.1 Project Estimates

Project will last 12 weeks with zero budget.

The Inception phase will take 4 weeks.

The Elaboration phase will take 3 weeks.

The Construction phase will take 3 weeks.

Details can be found below.

4.2 Project Plan

4.2.1 Phase Plan

Gantt chart which shows timeline is represented in “Project Gantt” file in PA1 folder

Phase	Sprint	Task	Start	End
Inception	0, 1		05/10/2023	02/11/2023
		Choose roles		
		Create an environment to store project information		
		Vision Document		
		Risk management		
		Project plan		
		Review Vision document and project plan		
		Sprint Review and planning		
Elaboration	2		04/11/2023	16/11/2023
		Draw Use-case Diagram		
		Write Use-case Specification		
		Revise the Project Plan		
		Revise the Vision document		

Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

		Sprint Review and planning		
Elaboration	3		17/11/2023	30/11/2023
		Draw the class diagram		
		Design the database		
		Design the draft version of the Architecture of the software		
		Update use-case specification document		
		Sprint Review and planning		
Construction	4		31/11/2023	14/12/2023
		Implement other core features		
		Implement the user interface for core features		
		Design test case		
		Test system for core release		
		Sprint Review and planning		
Construction	5		15/12/2023	23/12/2023
		Implement some other features		
		Design test case		
		Test system for core release		
		Sprint Review and planning		

Phase	Sprint	Description	Milestone
Inception	0, 1	Define the business model, product requirements, and project plan.	Vision document and the Software Development Plan.
Elaboration	2,3	Define the use case model.	Use case diagram

Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

		Define the architecture components and database design of the application. Implement some core features	Software Architecture Document and the Class diagram. Some core features of Book Lovers web app
Construction	4,5	Implement the remaining features of the application Test the application	Test cases Fully release the application

4.2.2 Releases

At this point, we plan two different versions to be launched. The first version will be released at the end of the elaboration phase with the core features of Book Lovers and its scope will be determined during the Elaboration Phase.

The second version will be the full version including the remaining feature of Book Lovers defined in the Vision document.

Any functionality remaining will be included in a subsequent release (if required).

4.2.3 Project Schedule

Phase	Number of Sprints	Start	End
Inception	2	05/10/2023	02/11/2023
Elaboration	2	04/11/2023	30/11/2023
Construction	2	31/11/2023	23/12/2023

4.2.4 Project Resourcing

Phase	Staff	Number	Skill / Experience
Inception	Whole team	5	Planning
Elaboration	Data engineer	2	Database (MongoDB)
	Implementer	5	Implementing (Django/Nodejs)
	Designer	2	HTML, CSS
Construction	Tester	5	Create and perform some tests.
	Implementer		Implement UI and other features

Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

4.3 Project Monitoring and Control

4.3.1 Requirements Management

The requirements for this system are captured in the Vision document. Requested changes to requirements are captured in Change Requests, and are approved as part of the Configuration Management process.

4.3.2 Reporting and Measurement

Updated cost and schedule estimates, and metrics summary reports, will be generated at the end of each iteration.

The Minimal Set of Metrics, as described in the RUP [Guidelines: Metrics](#), will be gathered on a weekly basis. These include:

Earned value for completed tasks. This is used to re-estimate the schedule and budget for the remainder of the project, and/or to identify need for scope changes.

Total defects open and closed – shown as a trend graph. This is used to help estimate the effort remaining to correct defects.

Acceptance test cases passing – shown as a trend graph. This is used to demonstrate progress to stakeholders.

In addition, overall costs will be monitored against the project budget.

4.3.3 Risk Management

Risks will be identified in Inception Phase using the steps identified in the RUP for Small Projects activity “Identify and Assess Risks”. Project risk is evaluated at least once per iteration and documented in this table. The risks of the greatest magnitude are listed first in the table.

Probability	Numerical Value	Loss	Numerical Value
Unlikely	10	Negligent	10
Seldom	25	Insignificant	25
Occasional	50	Moderate	50
Likely	75	Serious	75
Frequently	90	Catastrophic	90

Risk ID	Risk Description	Probability	Impact	Priority	Mitigation Strategy or Contingency Plan
1	User responses	Frequently ▾	Moderate ▾	4500	Testing app through frequent testing and user reports
2	Loss track of transaction	Seldom ▾	Serious ▾	1875	Compare user’s payment history with counterparty (Momo)
3	Hosting service has stopped working	Unlikely ▾	Catastrophic ▾	900	Pay and extend the payment plan on time. Choose a reliable service provider. Backup data frequently.
4	Problem with database	Unlikely ▾	Catastrophic ▾	900	Ensure fast and precise query request

Book Lovers	Version: <2.0>
Software Development Plan (Small Project)	Date: <28/10/23>
<document identifier>	

					Ensure correct information. Filter out or Censor inappropriate information.
5	Inaccurate estimation of required time to develop the software	Likely ▾	Moderate ▾	3750	Develop a comprehensive project plan and assemble a team of relevant staffs. This will allow us to accurately estimate the necessary time and set realistic deadlines.
6	The number of users increases beyond the system's capacity	Occational ▾	Serious ▾	3750	Scale/Upgrade database system
7	Different in schedule of each team members	Likely ▾	Moderate ▾	3750	Create a plan that fits all members' schedules
8	Lost all source code	Unlikely ▾	Catastrophic ▾	900	Backup source code locally and frequently
9	Out of budget	Seldom ▾	Insignificant ▾	625	Make adjustments to the project plan in response to any changes, as this can help avoid escalating project costs. Maintain oversight of project to prevent budget overrun.

4.3.4 Configuration Management

Appropriate tools will be selected which provide a database of Change Requests and a controlled versioned repository of project artifacts.

All source code, test scripts, and data files are included in baselines. Documentation related to the source code is also included in the baseline, such as design documentation. All customer deliverable artifacts are included in the final baseline of the iteration, including executables.