<Group09 - The Hand>

<Wellib>

Software Development Plan (Small Project)

Version <2.0>

Revision History

Date	Version	Description	Author
<17/Jun/23>	<1.0>	<Draft of 4. Management Process>	<Nguyễn Lê Hoàng Kha>
<21/Jun/23>	<1.1>	<Added Introduction and Project Overview>	<Nguyễn Tuấn Tuấn>
<05/Jul/23>	<2.0>	<Update project plan and format>	<Nguyễn Lê Hoàng Kha>

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Software Development Plan (Small Project)

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1. Introduction

This Software Development Plan provides an overview of the entire document, which includes many of its categories, such as purpose, scope, definitions, acronyms, abbreviations, references, and total project overview. And the categories will display information about each segment of the document with great details.

1.1 Purpose

The purpose of the Software Development Plan is to gather all information necessary to control the project. It describes the approach to the development of the software and is the top-level plan generated and used by managers to direct the development effort.

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 ***Wellib*** project, including deployment of the product. It will cover the main points of the project, going over the aim of the project, what it's main purpose, and the target users that it is created for and also provides deliverable during the overall progress, as well as many of its requirements such as what tools, platforms and budget it may need. Furthermore, this plan will incorporate the staff behind the project and the dynamics shared between members of the group, alongside their abilities and what role they have in the making of this project. Finally, a brief management process is also contained within this document to provide a structure to the entire process of the project development going forward, detailing its multiple stages and the goal of that particular time frame.

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

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

Management Process — This estimates of the amount of time needed to complete each segment of the plan, as well as describing many details of tasks and the methods to which every member has to adhere to complete them, and the usage of many tools and references needed for the overall project, also provides documentation of the process of developing the product.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

The **Wellib** project is a web based project that creates an online website that acts as a library monitored by librarians that provides books and such for many users, such as students, to read and borrow.

Purpose — The aim of the project is to create an online, interact-able data storage system that is used exclusively for publishing and borrowing books and such that are available at a physical location. This website can be used by librarians to keep track of the total number of books that are present at the actual library as well as their status as being available to borrow and such. It also doubles as an online library for readers to access and read many of the books present on the website and decide to have them borrowed.

Scope — The website delivered by our project provides a large amount of space to store books, many data points, and helpful information. It is also accompanied by many other functionalities that would prove convenient for using the website, and more.

Objectives — To complete the project, we will create a website that can be utilized by our client and is helpful for users that use the website, as well as enhance many features that other similar web-based projects have to offer and add many more functionalities to our project. Finally delivering a complete and polished product that is worth-using in every *way.*

2.2 Assumptions and Constraints

Assumptions:

- Traditional Online Library website
- Is administered by Admin to add, change, or delete.

- Provides many useful features for users.

Ex: Filter, Categories, Sort,etc.

- Resources and limited time will be sufficiently provided for each task.
- Team members have all the required skills.
- All tools, IDEs, and platforms are correctly utilized.
- The supplier will deliver consumables on time.

Constraints:

- Time constraint: Due to varying levels of difficulty and new languages to explore, given deadlines can cause some issues.
- Budget constraint: Some devices or services needed for the project could add to the cost of development and team budget is limited
- Technical constraint: lack of understanding of tools or working platforms may cause problems in the development process, such as making small system related mistakes or data loss

2.3 Project Deliverables

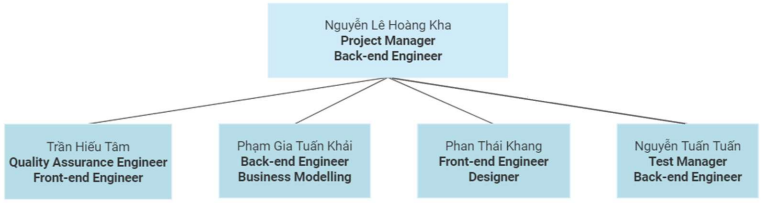
DELIVERABLES	DATE
Documents for PA0 Initial structure of source code.	17/6/2023
Documents for PA1 Code with updated features	8/7/2023
Documents for PA2	22/7/2023
Documents for PA3	5/8/2023
Documents for PA4	19/8/2023

3. Project Organization

Commented [1]: Hieeus Tama

3.1 Organizational Structure

[Group 9 - The Hand] Project organization structure



Especially, the team will have to work with Lecturers/TAs to ensure that everything goes smoothly.

3.2 Roles and Responsibilities

Person	Role
Nguyễn Lê Hoàng Kha, Sophomore IT Student as Project Manager and Back-end Engineer	***Project Manager and Back-end Engineer*** Leading entire teams, define project goals, communicate with stakeholders, and see a project through to its closure.
Trần Hiếu Tâm, Sophomore IT Student as Quality Assurance Engineer and Front-end Engineer	***Quality Assurance Engineer and Front-end Engineer***: Writing report, surveying the actual situation of the application and suggesting possible alternatives. Creating tests that identify issues with software before a product launch. Provide assistance to other roles as necessary.
Phan Thái Khang, Sophomore IT Student as Front-end Engineer and Designer	***Front-end Engineer and Designer:*** Responsible for maintaining the Project website in accordance with the needs of the users. Provide assistance to other roles as necessary.
Phạm Gia Tuấn Khải, Sophomore IT Student as Back-	***Back-end Engineer and Business Modelling***

end Engineer and Business Modelling	Responsible for keeping the Project website running properly and planning for generating revenue in the future. Provide assistance to other roles as necessary.
Nguyễn Tuấn Tuấn, Sophomore IT Student as Test Manager and Back-end Engineer	***Test Manager and Back-end Engineer:*** Responsible for keeping the Project website running properly. Provide assistance to other roles as necessary.

4. Management Process

4.1 Project Estimates

Estimated Cost:

1. Personnel:

- Members: All 5 members of the project team are IT students and have the basic knowledge about programming before. Therefore, there is no cost in personnel.

2. Technology and Infrastructure:

- Local hosting: Free and supported by Django Framework.

3. Software and Tools:

- Project Management System: Jira software for free.
- Development Tools: Various free development tools and IDEs can be used (e.g., Visual Studio Code, Sublime Text).

4. Miscellaneous:

- Graphics and Design: Team can use free graphic design tools or leverage open-source resources.

Estimated Schedule:

- Requirements Gathering and Planning: 1-2 weeks
- Design and Prototyping: 2-3 weeks
- Development and Testing: 4-6 weeks

- Deployment and Launch: 1 week

Basis for Estimates:

The cost and schedule estimates for a project are based on the following factors:

- Student availability: Consider the number of hours per week that students can dedicate to the project outside their academic commitments.

- Skill level: Estimate the learning curve and the time required for students to acquire necessary skills and knowledge.

- Project complexity: Assess the desired features and functionalities of the library management system and the level of technical expertise required.

Points for Re-estimation:

Re-estimation may be necessary in the following circumstances:

- Scope changes: If there are significant changes to project requirements or additional features are added, it may impact the estimated schedule and cost.

- Technical challenges: If unexpected technical hurdles are encountered during development, it may require reassessment of the schedule and potential additional costs.

- Resource constraints: If there are limitations on students' time availability or if additional resources are needed, re-estimation should occur.

- Project delays: If the project timeline extends beyond the initial estimate due to unforeseen circumstances or delays, re-estimation is required to adjust the schedule and associated costs.

4.2 Project Plan

Sprint 1 (From 3/6/2023 to 17/6/2023)

1. Tasks:

- Doing PA0 including (3/6/2023 to 17/6/2023):
  - Group registration : Every one
  - Tools setup: Every one
  - Project proposal:

- Introduction: Tuấn Nguyễn Tuấn
- Target users: Khải Phạm Gia Tuấn
- Environment: Khang Phan Thái
- Key features: Tâm Trần Hiếu
- Learning Python + Django: Everyone
- Building an initial structure for code: Kha Nguyễn Lê Hoàng

2. Output:

- Documents for PA0.
- Initial structure of source code.

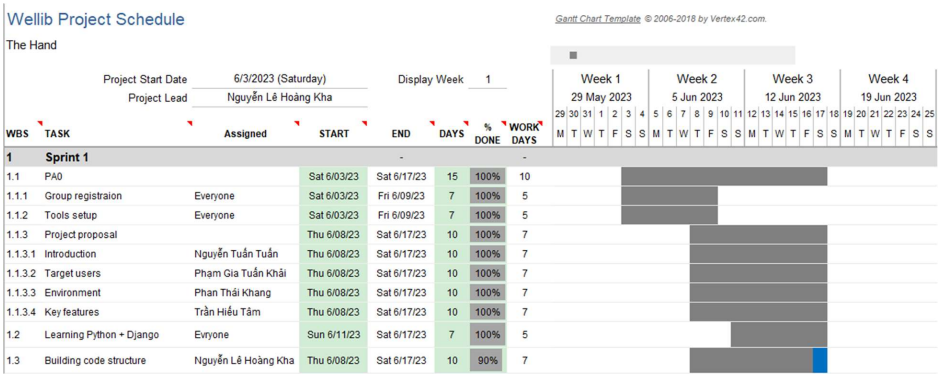
Wellib Project Schedule

The Hand

Gantt Chart Template © 2006-2018 by Vertex42.com.

Project Start Date: 6/3/2023 (Saturday) | Display Week: 1 | Project Lead: Nguyễn Lê Hoàng Kha

WBS	TASK	Assigned	START	END	DAYS	% DONE	WORK DAYS
1	Sprint 1			-			-
1.1	PA0		Sat 6/03/23	Sat 6/17/23	15	100%	10
1.1.1	Group registraion	Everyone	Sat 6/03/23	Fri 6/09/23	7	100%	5
1.1.2	Tools setup	Everyone	Sat 6/03/23	Fri 6/09/23	7	100%	5
1.1.3	Project proposal		Thu 6/08/23	Sat 6/17/23	10	100%	7
1.1.3.1	Introduction	Nguyễn Tuấn Tuấn	Thu 6/08/23	Sat 6/17/23	10	100%	7
1.1.3.2	Target users	Phạm Gia Tuấn Khải	Thu 6/08/23	Sat 6/17/23	10	100%	7
1.1.3.3	Environment	Phan Thái Khang	Thu 6/08/23	Sat 6/17/23	10	100%	7
1.1.3.4	Key features	Trần Hiếu Tâm	Thu 6/08/23	Sat 6/17/23	10	100%	7
1.2	Learning Python + Django	Evryone	Sun 6/11/23	Sat 6/17/23	7	100%	5
1.3	Building code structure	Nguyễn Lê Hoàng Kha	Thu 6/08/23	Sat 6/17/23	10	90%	7



Sprint 2 (From 17/6/2023 to 8/7/2023)

1. Task:

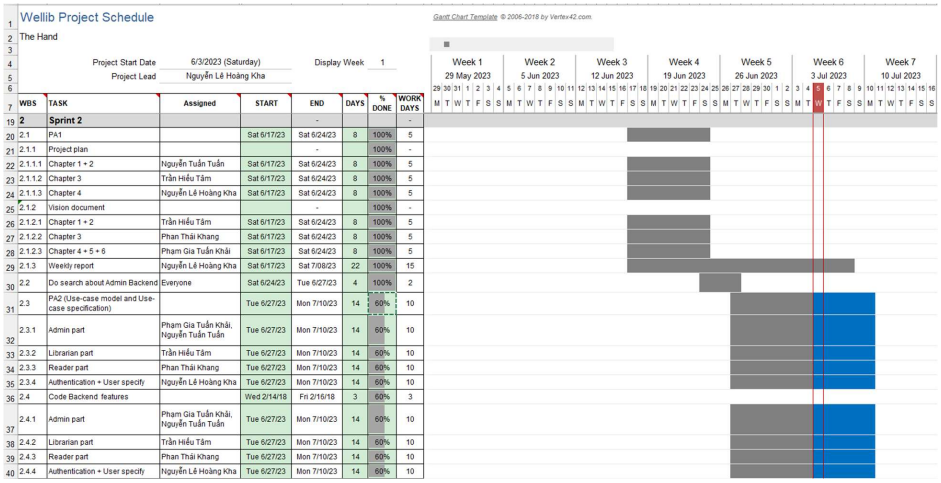
- Doing PA1 including (17/6/2023 to 24/6/2023):
  - Project plan:
    - Doing (1.Introduction + 2.Project Overview): Tuấn Nguyễn Tuấn
    - Doing (3. Project Organization): Tâm Trần Hiếu
    - Doing (4. Management Process): Kha Nguyễn Lê Hoàng
  - Vision document:

- Doing (1. + 2.): Tâm Trần Hiếu
- Doing (3.): Khang Phan Thái
- Doing (4. + 5. + 6.): Khải Phạm Gia Tuấn
  - Weekly report: Kha Nguyễn Lê Hoàng

- Assigning features-backend to members in order to do search: All members. (24/6/2023 to 27/6/2023)
- Doing Use-case model and Use-case specification of PA2 in parallel with coding back-end features (27/6/2023 to 10/7/2023):
  - Admin part: Khải Phạm Gia Tuấn Tuấn Nguyễn Tuấn
  - Librarian part: Tâm Trần Hiếu
  - Reader part: Khang Phan Thái
  - Authentication + User specify: Kha Nguyễn Lê Hoàng

2. Output:

- Documents for PA1.
- Code with updated features.



Wellib Project Schedule

The Hand

Gantt Chart Template © 2006-2018 by Vertex42.com

Project Start Date: 6/3/2023 (Saturday) | Display Week: 1

Project Lead: Nguyễn Lê Hoàng Kha

WBS	TASK	Assigned	START	END	DAYS	% DONE	WORK DAYS
2	Sprint 2			-			-
2.1	PA1		Sat 6/17/23	Sat 6/24/23	8	100%	5
2.1.1	Project plan			-		100%	-
2.1.1.1	Chapter 1 + 2	Nguyễn Tuấn Tuấn	Sat 6/17/23	Sat 6/24/23	8	100%	5
2.1.1.2	Chapter 3	Trần Hiếu Tâm	Sat 6/17/23	Sat 6/24/23	8	100%	5
2.1.1.3	Chapter 4	Nguyễn Lê Hoàng Kha	Sat 6/17/23	Sat 6/24/23	8	100%	5
2.1.2	Vision document			-		100%	-
2.1.2.1	Chapter 1 + 2	Trần Hiếu Tâm	Sat 6/17/23	Sat 6/24/23	8	100%	5
2.1.2.2	Chapter 3	Phan Thái Khang	Sat 6/17/23	Sat 6/24/23	8	100%	5
2.1.2.3	Chapter 4 + 5 + 6	Phạm Gia Tuấn Khải	Sat 6/17/23	Sat 6/24/23	8	100%	5
2.1.3	Weekly report	Nguyễn Lê Hoàng Kha	Sat 6/17/23	Sat 7/08/23	22	100%	15
2.2	Do search about Admin Backend	Everyone	Sat 6/24/23	Tue 6/27/23	4	100%	2
2.3	PA2 (Use-case model and Use-case specification)		Tue 6/27/23	Mon 7/10/23	14	60%	10
2.3.1	Admin part	Phạm Gia Tuấn Khải, Nguyễn Tuấn Tuấn	Tue 6/27/23	Mon 7/10/23	14	60%	10
2.3.2	Librarian part	Trần Hiếu Tâm	Tue 6/27/23	Mon 7/10/23	14	60%	10
2.3.3	Reader part	Phan Thái Khang	Tue 6/27/23	Mon 7/10/23	14	60%	10
2.3.4	Authentication + User specify	Nguyễn Lê Hoàng Kha	Tue 6/27/23	Mon 7/10/23	14	60%	10
2.4	Code Backend features		Wed 2/14/18	Fri 2/16/18	3	60%	3
2.4.1	Admin part	Phạm Gia Tuấn Khải, Nguyễn Tuấn Tuấn	Tue 6/27/23	Mon 7/10/23	14	60%	10
2.4.2	Librarian part	Trần Hiếu Tâm	Tue 6/27/23	Mon 7/10/23	14	60%	10
2.4.3	Reader part	Phan Thái Khang	Tue 6/27/23	Mon 7/10/23	14	60%	10
2.4.4	Authentication + User specify	Nguyễn Lê Hoàng Kha	Tue 6/27/23	Mon 7/10/23	14	60%	10

Sprint 3 (From 8/7/2023 to 22/7/2023)

1. Tasks:

- Doing PA2 including:
  - Revised project plan
  - Detailed vision document
  - Use-case model
  - Use-case specification
  - Weekly report

2. Output:

- Documents for PA2.

Sprint 4 (From 22/7/2023 to 5/8/2023)

1. Tasks:

- Doing PA3 including:
  - Use-case specification
  - Define software architecture
  - Class diagrams
  - Weekly report

2. Output:

- Documents for PA3.

Sprint 5 (From 5/8/2023 to 19/8/2023)

1. Tasks:

- Doing PA4 including:

- Revise SAD
- UI prototype
- Weekly report

2. Output:

- Documents for PA4.

Sprint 6 (From 12/8/2023 to 26/8/2023)

1. Tasks:

- Doing PA5 including:
- Test plan and test cases
- Project presentation
- Final submission

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

None

4.3.3 Risk Management

Risks will be identified in the 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.

Risk Ranking (High, Medium, Low)	**Risk Description and Impact**	**Mitigation Strategy and/or Contingency Plan**

High	Lack of knowledge about the software making process.	- Follow guidelines from PAs. - Listen to TA's information and advice. - Refer to the software making process on the Internet. - Ask information from the seniors.
High	Do not know how to use Programming Languages, Tools, … for making Projects.	- Members support each other in learning new things. - Check out Helpful Online Coding Resources. - Find good references on the Internet. - Have good learning methods. - Clearly understand the function of all programming languages or tools in the project.
Medium	Deadlines are missed.	- Tracking requirements for the leader. - Reasonable plans and timeline need to be developed. - Plan for extra time.
Medium	Low quality submissions.	- Spend more time on doing tasks. - Follow the provided intructions. - Willing to share difficulties with other members. - Revise carefully for possible mistakes before submitting.
High	Member's conflicts.	- Respect for each team member. - Celebrate differences in your team.

		- Clearly define roles and responsibilities - Resolving conflict early. - Give teams autonomy in decision-making.
High	Member turnover.	- Succession planning: maintain a succession plan that identifies potential replacements or backups for key roles within the project team - Encourage cross-training among team members to enhance their skills and knowledge in different areas of the project. - Transition planning outlines the tasks, responsibilities, and timelines for transferring their workload and knowledge to other team members. - Continuous Monitoring and Evaluation: consider the potential impact of member turnover on project timelines and resource allocation.

4.3.4 Configuration Management

None