
Pentominoes

HeartSteal
Software Development Plan (Small Project)
Version 1.1

HeartSteal	Version: 1.1
Software Development Plan (Small Project)	Date: 18/07/2025

Revision History

Date	Version	Description	Author
14/06/2025	1.0	Added Introduction and Project Overview sections	Hoàng Minh Giang
14/06/2025	1.0	Identified and documented current project risks in the Risk Management section	Võ Trung Hiếu
14/06/2025	1.0	Provided Project Organization section	Lưu Vĩnh Phát
18/07/2025	1.1	Specified project deliverables and added Business Analyst (BA) role to the Project Organization section	Võ Trung Hiếu

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Software Development Plan (Small Project)

1. Introduction

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 **HeartSteal** project, including deployment of the product.

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.

Project Management — describes the planning, estimation, monitoring, and risk control of the project

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

HeartSteal is an app that allows users to quickly capture photos, and privately share those moments directly within the app. This will be a simple yet emotionally rich way of communication that helps strengthen bonds between close individuals, whether it's friends, partners, or family members. HeartSteal targets young users, primarily high school and university students, as well as people aged 16 to 40.

The app will be developed as a mobile-first platform, available on Android, ensuring that users can stay connected wherever they are. The admin interface will be web-based, not mobile, allowing administrators to manage the system more efficiently via desktop or browser access.

2.2 Assumptions and Constraints

Assumptions for this project:

- All team members are familiar with the basic use of Git and GitHub for version control and collaboration.
- No team member will leave the project before its completion.
- Each team member already has a laptop or devices that can be used to complete the project.
- End users will have reliable access to the internet to use the application as intended.

Constraints for this project:

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- The project has a limited budget of 400,000 VND.
- The development team consists of 5 members.
- The overall technical skill level of the team is considered low, requiring careful task planning and learning support.

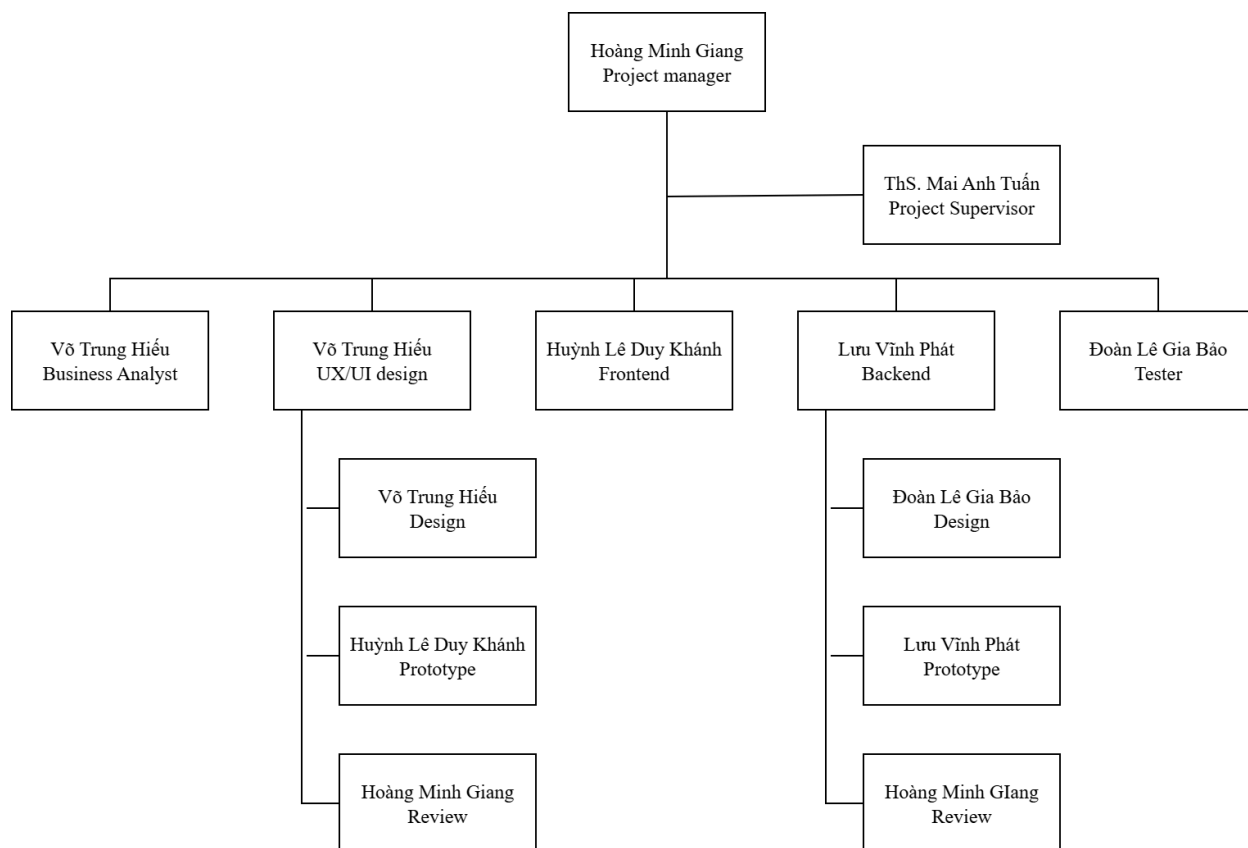
2.3 Project Deliverables

Sprint	Deliverables	Deadline
1	Project Plan	14/06/2025
1	Vision Document	14/06/2025
2	Use-case Diagram	17/07/2025
2	Use-case Specifications	19/07/2025
2	Use-case prototype	19/07/2025
3	Software Architecture Document	25/07/2025
3	Class Diagram	02/08/2025
4	Deployment Diagram for System Architecture	05/08/2025
4	UI prototype	09/08/2025
4	Application demo version	16/08/2025
5	Test plan	20/08/2025
5	Test cases document	22/08/2025
5	Test report	23/08/2025
5	Final Product	26/08/2025
5	Product presentation	26/08/2025

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3. Project Organization

3.1 Organizational Structure



3.2 Roles and Responsibilities

Person	Role
Hoàng Minh Giang	Project Manager, Code Reviewer
Võ Trung Hiếu	UX/ UI Designer, Business Analyst
Huỳnh Lê Duy Khánh	Responsible for maintaining architectural consistency across the frontend codebase
Lưu Vĩnh Phát	Responsible for maintaining architectural consistency across the backend codebase

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Đoàn Lê Gia Bảo	Tester
ThS. Mai Anh Tuấn	Project Supervisor

Note: While each team member has a primary role, responsibilities are not rigidly assigned. Team members are encouraged to collaborate across roles, offering help and receiving support where needed, while focusing mainly on their given roles.

4. Management Process

4.1 Project Estimates

The current estimation of the project: 0 VND

This value will be re-estimated if the expected number of users increases or if paid training is required for team members. The budget will primarily be allocated for backend server and database server rental.

Project final deadline will be 16/08/2025

4.2 Project Plan

4.2.1 Sprint 1

Time: 31/05/2025 - 14/06/2025

Objectives: Project planning and establish project vision

Task	Member	31/05/2025							07/06/2025						
		S	S	M	T	W	T	F	S	S	M	T	W	T	F
Filling project descriptions	Giang														
Define project organazational structure	Phát														
Identify and manage risks	Hiếu														
Define project vision	Giang														
Define project positioning	Hiếu														
Defining stakeholder and user descriptions	Khánh														
Stating project features	Bảo														

4.2.2 Sprint 2

Time: 14/06/2025 - 21/06/2025 + 12/07/2025 - 19/07/2025

Objectives: Gather and define detailed requirements.

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Task	Member	14/06/2025							12/07/2025						
		S	S	M	T	W	T	F	S	S	M	T	W	T	F
Update project plan	Giang														
Update vision document	Hiếu														
Draw use-case diagrams	All members														
Define use-case specifications	All members														

4.2.3 Sprint 3

Time: 19/07/2025 - 02/08/2025

Objectives: Specify use cases and design system architecture.

Task	Member	19/07/2025							26/07/2025						
		S	S	M	T	W	T	F	S	S	M	T	W	T	F
Update use-case specifications	All members														
Define software architecture	Giang														
Draw class diagrams	All members														
Define class diagram descriptions	All members														

4.2.4 Sprint 4

Time: 02/08/2025 - 16/08/2025

Objectives: Design UX/UI and implement core features

Release: A prototype version focused on demonstrating core UI/UX and user flows

Task	Member	02/08/2025							09/08/2025						
		S	S	M	T	W	T	F	S	S	M	T	W	T	F
Update software architecture	Giang														
Identify folder structure for backend server	Phát														
Design UX/UI	Hiếu														
Implemented Frontend	Khánh														
Implemented Backed	Bảo, Phát														

4.2.5 Sprint 5

Time: 16/08/2025 - 23/08/2025

Objectives: Test, integrate, and finalize the product.

Release: A functional version with all key features implemented

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Task	Member	16/08/2025							23/08/2025						
		S	S	M	T	W	T	F	S	S	M	T	W	T	F
Design test cases	Bảo														
Testing	Giang														
Test analysis	Hiếu														
Finalizing product	Khánh, Phát														

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

This section will be updated in the future.

4.3.3 Risk Management

Project risk is evaluated at least once per sprint and documented in this table.

Risk Ranking (High, Medium, Low)	Risk Description and Impact	Mitigation Strategy and/or Contingency Plan
Medium	Team members aren't on the same page with the PM about the task, causing misunderstanding.	Organize regular meetings to align task understanding. Use written task briefs and clarify expectations early..
Medium	Team members have a disagreement, which may affect collaboration and team morale.	Encourage open discussions, resolve conflicts quickly, and involve the PM as mediator if needed.
Low	Team members submit work late, leading to delays in the project timeline.	Set clear internal deadlines and reminders. Use simple project management tools to track progress.
Low	Incorrect estimation of time needed to complete each part may cause scheduling issues.	Break down tasks more granularly, estimate time based on past experience, and review as a team.
Low	Lack of time to finish the project may affect quality or lead to	Prioritize key features, create a realistic timeline with buffer time, and avoid scope

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	incomplete deliverables.	creep.
Low	Someone gets sick, which may delay task completion or reduce team capacity.	Distribute knowledge across team members. Create backup plans for key tasks. Allow flexibility in task assignments.
High	Don't have enough knowledge for our project, causing poor implementation or delays.	Identify missing knowledge early. Learn required tools and theories via courses, demo projects. Encourage team learning sessions.

4.3.4 Configuration Management

This section will be updated in the future.