
Pentominoes

**HeartSteal
Vision Document**

Version 1.1

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Revision History

Date	Version	Description	Author
14/06/2025	1.0	Provide document's Introduction	Hoàng Minh Giang
14/06/2025	1.0	Specify Project's Positioning	Võ Trung Hiếu
14/06/2025	1.0	Provide Stakeholder and User Descriptions	Huỳnh Lê Duy Khánh
14/06/2025	1.0	Provide Project Overview, specify Product Features and Non-Functional Requirements	Đoàn Lê Gia Bảo
17/07/2025	1.1	Detailed project features and revise Revision History	Hoàng Minh Giang

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Vision (Small Project)

1. Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of HeartSteal. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how HeartSteal fulfills these needs are detailed in the use-case and supplementary specifications.

1.1 References

1. Hồ Tuấn Thanh, "PA1 Video Document". YouTube, uploaded 15/11/2021, <https://youtu.be/4NNOPOuePZw?list=PL3Bp9JDvkAra8rRUPOpfKdKvJ6-okqaw&index=9>.

2. Positioning

2.1 Problem Statement

The problem of	<i>losing meaningful visual connection and lacking natural topics for conversation among close friends and loved ones</i>
affects	<i>young people, couples, introverted individuals, and family members who don't see each other often but want to stay emotionally connected throughout the day</i>
the impact of which is	<i>a growing sense of disconnection, reduced intimacy, and less frequent personal interaction — especially in long-distance or busy lifestyles — which can lead to emotional fatigue, sadness, and in some cases, even depression</i>
a successful solution would be	<i>an easy way to share spontaneous photos and keep in touch</i>

2.2 Product Position Statement

For	<i>close friends, couples, introverts, and family members who value emotional closeness</i>
Who	<i>want to share spontaneous, meaningful moments and stay in touch without the pressure of formal messages or the noise of social media</i>
The (product name)	<i>HeartSteal is a private social photo-sharing app</i>
That	<i>let users instantly share real-time photos directly from the app's home screen</i>
Unlike	<i>mainstream social media platforms that focus on filters and public sharing</i>
Our product	<i>prioritizes real-time moments and effortless emotional connection in a simple way.</i>

3. Stakeholder and User Descriptions

This section describes the uses of our product HeartSteal. There are 2 kinds of users: ordinary users and premium users.

3.1 Stakeholder Summary

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Name	Description	Responsibilities
Development team	IT team	Responsible for building and maintaining the product. Monitors the product process
Administrators	Administrators of the product	Responsible for managing the accounts, permissions and monitoring the usage.
Users	Includes ordinary users and premium users	Ensure that the system will meet the needs of users.
Regulators and Privacy Advocates	Government	Ensure that the product protects user privacy.

3.2 User Summary

Name	Description	Responsibilities	Stakeholder
Ordinary Users	Normal users who use the product without any payment.	Capturing and sharing images. Seeing shared images.	Users
Premium users	Users who pay for the premium of our system.	Premium users have all of the features that ordinary users have but with following features: <ul style="list-style-type: none"> • Uploading the images. • Sharing photos with chosen friends. 	Users
Administrator	Managing the users and monitoring usage.	Usage monitoring. They add, edit, or remove users, handle account suspensions, and assist with onboarding.	Administrators

3.3 User Environment

Our users are young and have a wide range of abilities to use technology, each with their own smartphone, enabling them to capture and share real-time photos anytime, anywhere.

Users interact with the app on their smartphones everyday to see their friend and family image.

Our users are individuals who want to share real-time images privately with their close friends and family. They want to have personal communication and share only with trusted people, not a public audience.

Administrators use computers to manage users and monitor usage via the web, so there's no need for installation and it supports access across multiple devices.

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3.4 Summary of Key Stakeholder or User Needs

Need	Priority	Concerns	Current Solution	Proposed Solutions
Capturing live photos	High	Other applications are not real-life images, most of them are filter applications whose images are not real.	Currently teenagers use an application which is not suitable for live capturing photos to capture them.	Forcing to capture real-life photos.
Lacking of communication	High	Some teenagers need a reason to have a communication	Teenagers have no reason to communicate with each other without studying or working.	By capturing live and special photos and sharing them, friends and family can have more chances to have a communication about the content of these photos.

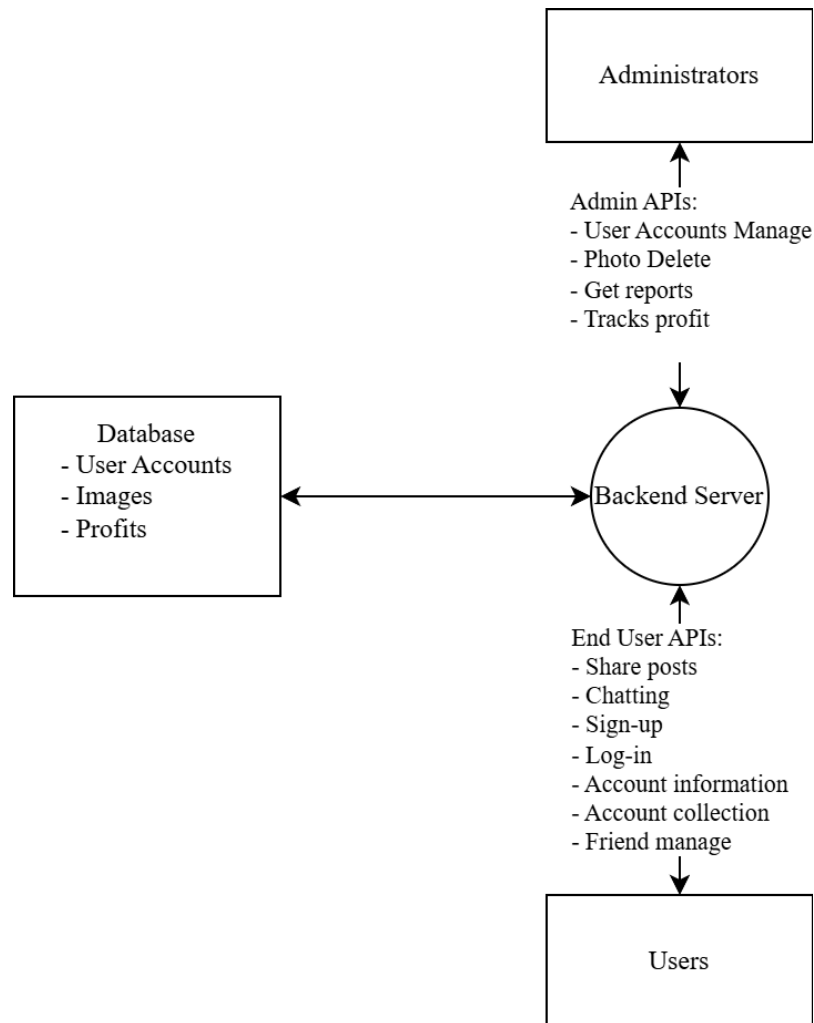
3.5 Alternatives and Competition

There are many existing products now like our product which can capture and upload images. For example, “LiveIn - Share Your Moment” is a very similar product to our products (users of this product can send live photos or drawings directly to friends and family).

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4. Product Overview

4.1 Product Perspective



4.2 Assumptions and Dependencies

The following assumptions and dependencies relate to the capabilities of the Mobile Real-Time Messaging App as outlined in this Vision Document:

- The mobile app will support Android (version 10 or higher) and iOS (version 14 or higher) devices throughout its initial deployment phase.
- The external APIs and cloud services used for messaging, authentication, and storage (such as Firebase) are assumed to remain stable and compatible as currently defined and integrated.
- It is assumed that users will have access to reliable internet connections (Wi-Fi or cellular) to support real-time communication features such as instant messaging and media sharing..
- It is assumed that necessary funding and technical resources will be secured by 2026 to support backend scalability and infrastructure maintenance.
- Launch and full functionality of the app in time for the public beta release (scheduled for January 2026) is dependent upon third-party service approval and app store review completion by December 15, 2025.

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5. Product Features

End User Features

No.	Feature	Description	Priority
1	Log In & Sign Up	Users create an account using a unique email, a unique username and a secure password. After registering, they can log in to access personalized content and connect with friends.	High
2	Recover Password	Users can recover their password using their registered emails.	Medium
3	Change Password	Users can change their password when they are logged in.	Medium
4	Sign Out	Users can sign out of the app with a tap.	Medium
5	Capture Photo	Users can take photos directly within the app using their device's camera.	High
6	Create Post	Users can create a post with a caption using the photo capture using the app or upload pictures in their device if they are Premium Users.	High
7	Select Friends to View Post	Premium Users can selectively choose who can view their post.	High
8	View Posts	Each shared photo becomes an interactive post where recipients can react with a heart.	High
9	Like Posts	Users can tap the heart button to let their friends know they are vibing with the post.	Medium
10	Download Post	Users can download their friends' shared photos	Low
11	Reply Post	Friends can reply with short messages in the response box to express how the photo makes them feel, creating more personal engagement.	Medium
12	Add Friends	Regular users can add up to 20 friends, while premium users can add up to 60 friends.	High
13	Delete Friends	User can easily delete their friends in the friends management section	High

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14	Message in Real-Time	A core feature allowing users to chat privately and instantly.	High
15	React to Messages	Quickly respond to messages with emojis.	Medium
16	Block/Unblock Friends	Stop receiving messages from selected users.	Low
17	Receive Notifications	The app sends real-time notifications for: New friend requests, New messages, Other important activities	High
18	Manage Notifications	Users can manage what type of notification they will receive like: friend request, messages.	Low
19	Customize Profile Appearance	Users can change their avatar and nickname.	Medium
20	Report problems	Users can report bugs or send suggestions to the developer team.	Medium
21	Delete Account	Allows users to delete their account if they choose to stop using the app.	High

Administrator Features

No.	Feature	Description	Priority
1	Log In	Administrators can log in using a given account with a strong password.	High
2	Suspend User	Temporarily restricts access to the app.	Low
3	Delete User Account	Permanently removes the user's account and all associated data from the system.	High
4	Delete Photo	Removes a specific photo from all areas of the app where it appears (profiles, posts, chat,...)	High
5	View User Session Duration Statistics	Show how long a user actively uses the app during a session using a graph.	High
6	View Usage Frequency Statistics	Measures how often a user returns to the app (e.g., time between sessions or average sessions per day) using a graph.	Medium
7	View Profit Statistics	Tracks how many users have a subscription to premium using a graph.	High

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8	View Reports from Users	Displays reports or complaints submitted by users regarding content, profiles, or interactions.	High
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6. Non-Functional Requirements

Performance Requirements

- The application must load the main interface within 4 seconds after launch.
- Real-time features such as messaging and photo sharing must have a maximum delay of 2 seconds.
- The backend system must support up to 2000 concurrent users during peak hours without noticeable slowdown.

Availability

- The app should be available and operational at least 99.5% of the time per month, excluding scheduled maintenance windows.

Scalability

- The backend infrastructure must be able to scale to accommodate an increasing number of users and storage needs over time.

Usability

- The user interface must be simple and intuitive, designed for users with minimal guidance required.
- All app functions must be responsive and optimized for use on a wide range of mobile devices and screen sizes.

Maintainability

- The system must be modular and well-documented to ensure that future updates and maintenance tasks can be completed efficiently.