SpUStify

Vision D ocument

Version 1.1

Revision History

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| 24/06/2023 | 1.0 | Initial version | Dương Trường Bình |
| 08/07/2023 | 1.1 | Update Product Features | Dương Trường Bình |
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Table of Contents

[**1. Introduction 4**](#_heading=h.gjdgxs)

[**2. Positioning 4**](#_heading=h.30j0zll)

[2.1 Problem Statement 4](#_heading=h.1fob9te)

[2.2 Product Position Statement 4](#_heading=h.3znysh7)

[**3. Stakeholder and User Descriptions 4**](#_heading=h.tyjcwt)

[3.1 Stakeholder Summary 4](#_heading=h.3dy6vkm)

[3.2 User Summary 5](#_heading=h.1t3h5sf)

[3.3 User Environment 5](#_heading=h.4d34og8)

[3.4 Alternatives and Competition 5](#_heading=h.2s8eyo1)

[**4. Product Features 6**](#_heading=h.17dp8vu)

[**5. Non-Functional Requirements 7**](#_heading=h.3rdcrjn)

Vision (Small Project)

# Introduction

The introduction of the Vision document provides an overview of the entire document. It includes the purpose and references of this Vision document.

# Positioning

## Problem Statement

| The problem of | listening to free songs online, accessing, publishing, sharing, and customizing music through playlists |
| --- | --- |
| affects | listeners |
| the impact of which is | Listeners have to pay so they can listen to songs or the music listening process is interrupted by ads |
| A successful solution would be | creating a free music platform for listeners at no cost and without advertising |

## Product Position Statement

| For | music listeners, artists |
| --- | --- |
| Who | publish and listen to songs, create playlists |
| The (product name) | SpUStify |
| That | helping music artists to publish their songs and listeners to listen to music for free without interruptions and customize their playlists |
| Unlike | the current music platforms: Zingmp3, Spotify … |
| Our product | allows people to publish, customize their playlists, listen to songs for free without advertising |

# Stakeholder and User Descriptions

## Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| Developers | Developers build a website that meets all user requirements | Researching, designing, implementing, and managing software programs. |
| Teachers | Teachers introduce the course and guide the software design processes | Teachers support students understand the methodology of Software Engineering |
| Students | Students studying at HCMUS | Giving feedbacks about architecture and interface of a website |
| Artists | Artists share their own music with the community through SpUStify | Contributing to building SpUStify's music store |

## User Summary

| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| --- | --- | --- | --- |
| Client | End consumers of the web, maybe a member or not | View,play songs, playlists  Browse and search for playlists and songs  Upload songs, create playlists (only for member)  Likes song and playlists (only for member) | Self - represented |
| Administrator | Main managers of a website | View clients’ information (Full Name, DOB, Email, Phone )  Upload a song,create a playlist to the website  Ensure the leaderboard on the website is up-to-date  Delete clients’ account | Self - represented |

## User Environment

* SpUStify is a community-oriented music platform targeting educated, computer literate individuals who own personal computers. Users can visit the website to explore a wide range of songs and playlists, seeking flexibility in their music listening experience and sharing their own music with the community.
* The number of users is expected to grow significantly in the future, driven by factors such as staying up-to-date with current trends, implementing effective marketing campaigns, and leveraging social media platforms like Instagram, TikTok, and Twitter for music promotion and sharing.
* In addition, artists and individuals seeking self-development opportunities may utilize the website to discover new music.
* Initially, the website will have a limited release exclusively for university students. However, future plans involve marketing subsequent releases to schools, colleges, and universities. SpUStify is designed to be expandable, allowing for scalability and accommodating a growing user base. User community data will be organized in easily accessible table formats upon system installation, facilitating efficient management.
* The administrator will require a browser-enabled device to perform various tasks such as categorizing songs and playlists, monitoring system status, managing artists and clients, and generating reports.

## Alternatives and Competition

* Some general examples of alternatives and competitive choices that stakeholders might consider in the context of a music website like SpUStify:
  + Competitor's product: Stakeholders may consider purchasing or subscribing to a competitor's music website or streaming platform. Examples of competitors in this space include Spotify, Apple Music, Amazon Music, and YouTube Music. The strengths and weaknesses of each competitor can vary, but they typically include factors such as music catalog size, user interface, personalized recommendations, pricing, and exclusive content.
  + Building a homegrown solution: Stakeholders might consider developing their own music website from scratch, creating a customized platform tailored to their specific needs. This approach offers the advantage of complete control over features and functionality. However, it requires significant development resources, time, and ongoing maintenance costs.
  + Maintaining the status quo: Stakeholders may choose to stick with their current music website or platform, particularly if they perceive it to be meeting their needs adequately. This option avoids the potential risks and costs associated with switching to a new solution but may limit access to new features and improvements offered by competitors.
* It's important to note that the specific strengths and weaknesses of competitors will vary based on market dynamics, user preferences, and the specific features and capabilities offered by each platform. Stakeholders and end users would need to assess these factors based on their own priorities and requirements before making a decision.

# Product Features

| No. | Feature | Description | Priority |
| --- | --- | --- | --- |
| 1. | Search keywords | Users enter the keyword to search the song title or artist name or playlist’s name  Artists just search their songs and playlists | Medium |
| 2. | View detail | Users have the ability to access detailed information about the song and playlist (title, creation date, content), and some information about the author (name). | Low |
| 3. | Leaderboard | Based on user ratings (number of likes, number of listens), a ranking table is created for the songs. | High |
| 4. | Favorite songs and playlists | List the songs in the playlists that the user has liked (handle the like button to avoid cases where the button is pressed multiple times and continues to loop). | High |
| 5. | Play song | The feature of the website enables users to listen to their songs or playlists while browsing the website. Users can choose from a selection of available songs or playlists. Once a song or playlist is selected, providing the user with controls such as play, pause, and volume adjustment. | Medium |
| 6. | Upload songs | Upload songs (song title, song file) - handle cases where there are duplicate song or playlist names. | Medium |
| 7. | Edit songs | Edit some information fields (name, song file, lyrics file). | Medium |
| 8. | Delete songs | Delete songs with the user's permission (ask the user again when they press the delete button). | Medium |
| 9. | Create a playlist | Upload playlists (name, list of songs) - handle cases where there are duplicate song or playlist names. | Medium |
| 10. | Edit a playlist | Edit some information fields (name,, list of songs)  Update new songs (in the correct format) or delete old songs. | Medium |
| 11. | Download a song/ playlist | Allows users to download a song as an mp3 file or a playlist as a zip file of mp3 files | Medium |
| 11. | Delete playlists/albums | Delete playlists with the user's permission (ask the user again when they press the delete button). | Medium |
| 12. | Register an account | User registers to become a member (username, email, password 1, password 2). | Low |
| 13. | Log in | User logs in to the account (username, password). | Low |
| 14. | Playlist and song recommendations | Suggest to the user songs that they listen to frequently or that are on the ranking table. Also, suggest playlists with a high total number of song plays. | High |
| 15. | Calculate and generate reports | Calculate the number of registered user accounts, user access counts (monthly, weekly, etc.), number of returning users, etc. | High |
| 16. | Edit accounts | Users can view and edit certain information such as first name, last name, and email (Gmail).  They can also update their password. | Low |

# Non-Functional Requirements

Security:

* The website must have robust security measures to protect user information, including accounts, passwords, and personal data …

Speed and Performance:

* The website should have fast page loading times to ensure a smooth user experience.
* It should support a moderate number of concurrent users without compromising performance.

Maintenance and Scalability:

* The website should be easy to maintain and upgrade without causing disruptions to user activity.

Hardware Requirements:

* Computer or Mobile Device:
  + Desktop Computer: A personal computer with an equivalent Intel Core i3 or AMD processor, 4GB of RAM, and sufficient free storage space to store relevant files and data.
  + Mobile Device: A smartphone or tablet running iOS or Android operating system with the latest version of the operating system and web browser.
* Web Browser:
  + Popular web browsers such as Google Chrome, Mozilla Firefox, Safari, or Microsoft Edge. It is recommended to use the latest version of the web browser for the best experience and support for advanced web technologies.
* Network Connection:
  + The computer or mobile device needs to have an Internet connection. This can be a wired connection (such as Ethernet) or a wireless connection (such as Wi-Fi or 3G/4G).

Platform Requirements:

* The website must be compatible with popular web browsers such as Google Chrome, Mozilla Firefox, and Safari…

Environmental Requirements:

* The website should operate reliably in various server environments such as Windows, Linux, or macOS.
* It should function stably and reliably in different network environments, including LAN and the Internet.

Product Quality:

* Performance: The website must meet requirements for fast response times and high processing capability.
* Reliability: The website should be stable and free from frequent errors during regular usage.
* Fault Tolerance: The website should have the ability to recover from failures, such as network disruptions or software errors.
* Usability: The user interface must be user-friendly, intuitive, and easy to understand.

Design Constraints and Dependencies:

* The system must adhere to HTML, CSS standards, and web design principles to maintain consistency and compatibility.
* Identify and adhere to constraints related to integrating technologies such as HTML, Tailwind CSS, Django, and PostgreSQL.

Documentation Requirements:

* User Guide: Provide detailed documentation on how to use the system's features and functionalities.
* Installation Requirements: Provide detailed installation instructions for deploying the system in different environments.

Priority of Other Product Requirements:

* **Functionality**: Ensuring proper website functioning, including user-friendly interface, search capabilities, and seamless music download.
* **Performance and Speed**: Prioritizing fast download speeds and efficient performance.
* **Security**: Implementing secure authentication and encryption protocols to protect user data.
* **User Experience (UX)**: Focusing on intuitive navigation, responsive design, and visually appealing layouts.
* **Compatibility**: Ensuring the website works across different platforms and devices.
* **Accessibility**: Adhering to accessibility guidelines for users with disabilities.
* **Scalability**: Designing for future growth and increased traffic.
* **Documentation and Support**: Providing comprehensive documentation and responsive customer support.