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**Keepsake**

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**Software Requirements Specification**  
**Version 1.1**

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## Revision History

Date	Version	Description	Author
11/20/22	1.0	First iteration	Niko Urban
4/18/23	1.1	Update	Lucas Raynor

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# Software Requirements Specification

## 1. Introduction

### 1.1 The Purpose of the Keepsake

The purpose of Keepsake is to connect families and help them share stories and memories online. By using recorded audio, Keepsake makes it easy for people of all ages to share their experiences and connect with their loved ones. This can help bring families closer together, even if they are not able to be together in person. By creating a virtual space where family members can share their memories, Keepsake helps to preserve the collective history and heritage of a family. It can also provide a way for families to connect across distances, and to keep in touch with older family members who may not be as comfortable using other forms of technology. In this way, Keepsake serves as a bridge between generations, helping to foster intergenerational connections and strengthen the bonds between family members.

### 1.2 The Purpose of this Document

The purpose of this Software Requirements Specification (SRS) document is to provide a detailed description of the requirements for the Keepsake software. This SRS will outline the functional and non-functional requirements for the software, as well as any constraints or dependencies that must be considered during the development process. By defining these requirements, this SRS will serve as a guide for the development team, ensuring that the final product meets the needs of its users and stakeholders. This SRS will also provide a reference for testing and validation of the Keepsake software, helping to ensure that it is reliable and meets the stated requirements.

### 1.3 Product Scope

The product scope of Keepsake is initially focused on providing a simple and user-friendly platform for recording and sharing audio stories and memories within families. The goal is to make it easy for people of all ages to connect and share their experiences, helping to preserve family history and build stronger bonds. As Keepsake grows and develops, the product scope will expand to include new features and functionality. The ultimate goal is to have a profitable product with a large user base across the globe. To achieve this, Keepsake will need to continue to innovate and provide value to its users.

### 1.4 Definitions, Acronyms, and Abbreviations

UI (User Interface): The UI is the part of a website or application that the user interacts with. It is the visual and interactive elements that the user sees and uses to navigate the site or application.

API (Application Programming Interface): An API is a set of programming instructions that allows different software programs to communicate with each other. APIs enable different applications to share data and functionality, allowing them to work together in a seamless and integrated way.

Frontend: The frontend of a website or application is the part that the user sees and interacts with. It includes the UI, as well as the client-side code (e.g., HTML, CSS, JavaScript) that controls the UI and communicates with the backend.

Backend: The backend of a website or application is the part that runs on the server and handles tasks such as data storage, processing, and security. The backend typically includes a database,

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server-side code (NodeJS, MongoDB), and other technologies that support the functionality of the site or application.

## 1.5 References

Glossary: <https://docs.google.com/document/d/1ALjwms22Pihqi4sMEFfIDGgi-arEi53cj5C22xoSMq0/edit#>

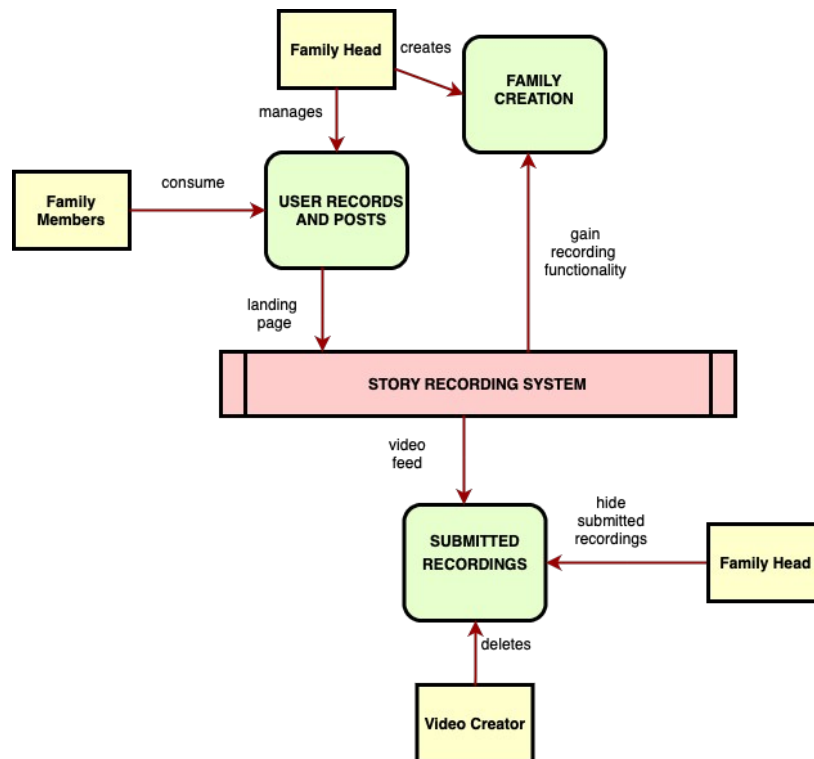
Vision: [https://docs.google.com/document/d/1qJahC3aVfEF6dRVjEW3--VyuDC9cP6qC\\_GNNUoqypE/edit](https://docs.google.com/document/d/1qJahC3aVfEF6dRVjEW3--VyuDC9cP6qC_GNNUoqypE/edit)

Use cases: <https://docs.google.com/document/d/1v-tQvSxZ5szALUrcHTAg68PkQXspzpPNZzXe7625Qo/edit>

## 2. Overall Description

### 2.1 Product Perspective

Keepsake is a new product that aims to connect families and help them share stories and memories online. It is the first member of a new product line focused on enhancing intergenerational connections and preserving family history. The Keepsake website will be a standalone application, not part of a larger system. However, it may interface with other systems such as social media platforms to allow users to share their Keepsake recordings with a broader audience.



### 2.2 User Classes and Characteristics:

User class	Description
Normal User	Able to make posts, contribute to family, and share memories
Family lead	Able to do the same as a normal user, but is able to invite and remove family memories

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## 2.3 Operating Environment

OE-1: The Keepsake website shall operate correctly with the following web browsers: Chrome, Firefox, and Safari.

OE-2: The Keepsake website shall be hosted and deployed using AWS

OE-3: The Keepsake website shall permit user access from across the globe. It shall also be compatible with Android and iOS smartphones and tablets.

## 2.4 Design and Implementation Constraints

CO-1: The Keepsake website must be developed in accordance with corporate policies and guidelines, including any relevant security and privacy requirements.

CO-2: The Keepsake website must be compatible with a range of different web browsers, including Chrome, Firefox, and Safari.

CO-3: The Keepsake website must be built using a modern, user-friendly web design, with a focus on accessibility and ease of use.

CO-4: The Keepsake website must be hosted on a secure, corporate-approved server, and must be capable of handling high volumes of traffic and data.

CO-5: The Keepsake website must be developed using industry-standard technologies and tools, such as HTML5, CSS, and JavaScript.

## 2.5 Assumptions and Dependencies

AS-1: The Keepsake website will be built using a modern, responsive web design framework, such as Bootstrap.

AS-2: The Keepsake website will be hosted on a secure, reliable server with sufficient capacity to handle high volumes of traffic and data.

AS-3: The Keepsake website will be tested and validated on a range of different devices, including desktop computers, laptops, and mobile devices.

DE-1: The development of the Keepsake website may be impacted by delays or changes to the availability of third-party components, such as audio recording and playback libraries.

DE-2: The success of the Keepsake website may be affected by changes in user behavior or preferences, such as an increase in the use of mobile devices for accessing the internet.

# 3. Data Requirements

## 3.1 Logical Data Model

### *Entities:*

User - represents a user of the app and stores user details such as name, email, and password.

Post - represents a story or recording that a user has shared on the app and stores details such as the title, description, and associated media files.

Family - represents a group of users who are connected through the app and stores details such as the family lead, family name, and family members.

### *Relationships:*

A user can create many posts, and each post is associated with one user. A post can belong to

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many families, and each family can have many posts. A user can belong to many families, and each family can have many users.

### 3.2 Data Acquisition, Integrity, Retention, and Disposal

DI-1: The Keepsake website will store user-generated recordings on a secure, encrypted server, and will regularly back up this data to prevent loss or corruption.

DI-2: The Keepsake website will verify the accuracy of data entered by users, and will provide clear error messages if any problems are detected.

DI-3: The Keepsake website will retain user-generated recordings for a period of six months, after which they will be automatically deleted.

DI-4: The Keepsake website will allow users to delete their recordings at any time, and will permanently remove the data from the server.

## 4. External Interface Requirements

### 4.1 User Interfaces

UI-1: The Keepsake website will use a modern, responsive web design that is consistent with corporate branding and guidelines.

UI-2: The Keepsake website will use clear and concise error messages to inform users if any problems are detected during the recording or uploading process, and will provide instructions on how to resolve the problem.

### 4.2 Software Interfaces

SI-1: Audio recording system

SI-1.1: The Keepsake website will use an audio recording system to capture and store audio recordings from users.

SI-1.2: The Keepsake website will provide a user-friendly interface for recording, reviewing, and sharing audio recordings.

SI-1.3: The Keepsake website will ensure that audio recordings are stored securely and are accessible only to authorized users.

SI-2: Family management system

SI-2.1: The Keepsake website will use a family management system to manage user accounts and access to audio recordings.

SI-2.2: The Keepsake website will provide user authentication and authorization capabilities, allowing users to securely access their audio recordings.

SI-2.3: The Keepsake website will allow users to create and manage family groups, and to share audio recordings with other members of their group.

### 4.3 Hardware Interfaces

No hardware interfaces have been identified.

### 4.4 Communications Interfaces

CI-1: The Keepsake website will use email to notify users of any updates to their account, such as changes to their account information or privacy settings.

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CI-2: The Keepsake website will use web browser functionality to provide users with access to the website, and to allow them to record, review, and share audio recordings.

CI-3: The Keepsake website will use secure network protocols to ensure the privacy and security of user data, and to prevent unauthorized access to audio recordings and other data.

## 5. Quality Attributes

### 5.1 Usability

USE-1: The Keepsake website will be designed to be easy to use, with a simple and intuitive interface that allows users to quickly and easily record, review, and share audio recordings.

USE-2: The Keepsake website will be designed to be easy to learn, with clear and concise instructions and help materials that guide users through the process of recording and sharing audio recordings.

USE-3: The Keepsake website will be designed to minimize errors and facilitate error recovery, with clear and concise error messages and instructions for resolving common issues.

USE-4: The Keepsake website will be designed to be efficient, with a fast and responsive interface that allows users to quickly navigate and interact with the website.

### 5.2 Performance

PER-1: The Keepsake website, for now, will be designed to accommodate a large number of users, with support for a total of 10000 users and a maximum of 250 concurrent users during peak usage times.

PER-2: The Keepsake website will be designed to load quickly and efficiently, with the whole application being downloaded at once (SPA)

PER-3: The Keepsake website will be designed to provide users with timely feedback, with confirmation messages displayed within an average of 2 seconds and a maximum of 4 seconds after the user submits information to the website.

### 5.3 Security

SEC-1: The Keepsake website will use secure network protocols and encryption to protect the transmission and storage of user data and audio recordings.

SEC-2: The Keepsake website will require users to log in to their account in order to access and use the website, and will provide secure authentication mechanisms to protect user accounts from unauthorized access.

SEC-3: The Keepsake website will enforce strict access controls to protect user data and audio recordings, and will only permit authorized users to access and manage audio recordings.

SEC-4: The Keepsake website will provide users with granular control over the sharing of their audio recordings, and will only permit users to share recordings with other members of their designated family group.

### 5.4 Safety

SAF-1: The Keepsake website will implement robust security measures to protect user data and audio recordings, and to prevent unauthorized access to user accounts.

SAF-2: The Keepsake website will provide users with tools and features to manage the sharing of their audio recordings, and will allow users to easily revoke access to recordings if needed.



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## 5.5 Robustness

ROB-1: The Keepsake website will implement robust data storage and backup systems to ensure that user data and audio recordings are preserved and can be accessed in the event of data loss or corruption.

ROB-2: The Keepsake website will be designed to handle large volumes of user data and audio recordings, and will be able to support a large number of users concurrently without experiencing performance degradation or other issues.

## 5.6 Availability

AV-1: The Keepsake website will have a 99.9% uptime, with scheduled maintenance windows occurring only during off-peak hours.

AV-2: The Keepsake website will implement redundant systems and backups to ensure that user data and audio recordings are preserved and can be accessed even in the event of hardware or software failures.

AV-3: The Keepsake website will provide users with access to their audio recordings from any device with an internet connection, including smartphones, tablets, and computers.

## 6. Internationalization and Localization Requirements

INT-1: The Keepsake website will be supported in regions across the globe

## 7. Appendix A:

Figure C-4 is a state-transition diagram that shows the possible keepsake applications statuses and the allowed changes in status.

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