

Software Requirements Specification

for

Web Based Personal Journal (JournalJay)

Version <1.1>

Prepared by

Group Name: Sizzle Snap

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Revisions

| Version | Primary Author(s) | Description of Version | Date Completed |
| --- | --- | --- | --- |
| First Draft Version 1.1 | Laurel Anderson  Irina Bejan | The first draft has the teams first attempt at each section. All parts are complete. Waiting for feedback. | 11/06/20 |

# *<In this template you will find text bounded by the “<>” symbols. This text appears in italics and is intended to provide explanations and guide you through the document. There are two types of comments in this document. The comments that are in black are intended specifically for the course. The comments that are in blue are more general and apply to any SRS. Please make sure to delete all the comments before submitting the document.>*

# Introduction

*<TO DO: Please provide a brief introduction to your project and a brief overview of what the reader will find in this section.>*

*The introduction section gives a brief description of everything in this SRS document. The purpose of this document is also given, and a list of definitions is provided.*

## Document Purpose

<Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the scope of the product that is covered by this SRS, particularly if this SRS describes only part of the system or a single subsystem.

TO DO: Write 1-2 paragraphs describing the purpose of this document as explained above.>

The product described in this document is the web based personal journal site JournalJay version <1.1>. The purpose of this document is to describe the scope of the JournalJay to users, system administrators and the development team. Aspects of the system will be described in this document including but not limited to, user interaction, system constraints, and interfaces. This document

## Product Scope

<Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals.

TO DO: 1-2 paragraphs describing the scope of the product. Make sure to describe the benefits associated with the product.>

JournalJay is web-based journaling application using HTML/CSS and JavaScript. The web journal is a convenient alternative to traditional journaling for users that have electronic devices. The web journal has a unique sign in for each user. Each user can have journal entries up 365 entries that they can review at any time while they are signed in. The website also has a mood tracker. For each user entry, they can assign a mood for the day from a list of presets on the site. A user will also be able to change the journal entry background from a set of presets. Usernames, passwords, and journal entries are stored on a simple database. The software needs an internet connection to work.

## Intended Audience and Document Overview

<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers (In your case it would probably be the “client” and the professor). Describe what the rest of this SRS contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>

*The readers that this document is intended for is the professor of CS 320, the developers, and JournalJay users. The professor of CS 320 would look for the completeness of the entire document. The developers are Laurel Anderson and Irina Bejan, they would use this document to reference the project outline and requirements. The user would use this document to look up definitions used for the software (section 1.4) and the product functionality (section 2.2). This document is organized with the introduction first. The introduction includes the document specific requirements. The overall description section and the specific requirements section describes the software in its entirety. Section 4 describes the non-functional requirements.*

## Definitions, Acronyms and Abbreviations

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.

TO DO: Please provide a list of all abbreviations and acronyms used in this document sorted in alphabetical order.>

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Admin/  Administrator | Someone who is given specific permissions to manage and control the system. |
| App | Application |
| CS | Computer science |
| CSS | (Cascading Style Sheets) A programming language used to style HTML. |
| HTML | (Hypertext Markup Language) The standard markup language for documents designed to be displayed in a web browser. |
| HTTP | (Hypertext Transfer Protocol) The data transfer protocol used on the World Wide Web. |
| IEEE | Institute of Electrical and Electronics Engineers. |
| User | Someone who interacts with the web application. |

## Document Conventions

<In general, this document follows the IEEE formatting requirements. Use Arial font size 11, or 12 throughout the document for text. Use italics for comments. Document text should be single spaced and maintain the 1” margins found in this template. For Section and Subsection titles please follow the template.

TO DO: Describe any standards or typographical conventions that were followed when writing this SRS, such as fonts or highlighting that have special significance. Sometimes, it is useful to divide this section to several sections, e.g., Formatting Conventions, Naming Conventions, etc.>

*This document follows the IEEE formatting requirements. This includes size 11 Arial font for text, single spaces, and 1” margins. Italics are used only for comments. Sections are labeled by size 18 bolded text and centered on a dark background. Subtitles are labeled by size 14 bolded text, justified left.*

## References and Acknowledgments

<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document.

TO DO: Use the standard IEEE citation guide (attached) for this section.>

We would like to thank God for helping us not lose our minds during this semester.

[1] IEEE Software Engineering Standards Committee, “IEEE Std 830-1998, IEEE Recommended

Practice for Software Requirements Specifications”, October 20, 1998.

# Overall Description

## Product Perspective

<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. In this part, make sure to include a simple diagram that shows the major components of the overall system, subsystem interconnections, and external interface. In this section it is crucial that you will be creative and provide as much information as possible.

TO DO: Provide at least one paragraph describing product perspective. Provide a general diagram that will illustrate how your product interacts with the environment and in what context it is being used, i.e., context diagram.>

*JournalJay is an online application that allows users to create personalized journal entries in an easy way. When the user goes to the website, they will be prompted to sign in or create username and password. Once signed in, the user will be able to create one journal entry a day. The user will also be able customize their journal entries and pick a mood for the day from a list of presets while they are creating their entry. The user will be able to revisit entries later.*

*The user will also be able to get help regarding the site from a help button on each screen. The help button will show the user a quick tutorial that describes the different functions of the site. JournalJay is a self-contained product, a digital conversion of a traditional medium. The usernames, passwords, and journal entries will be stored on a simple database client side.*

Diagram

Description automatically generated

## Product Functionality

<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, will be effective.

TO DO:

1. Provide a bulleted list of all the major functions of the system

2. **(Optional)** Provide a Data Flow Diagram of the system to show how these functions relate to each other. This is useful when there is a clear sequence for the functions being performed.>

* The user can create a username and password for their own account.
* The user can create a journal entry every day.
* The user can customize the journal entry while they are creating it.
* The user can choose a “mood of the day” when creating a journal entry.
* The user can review any previously created journal entry while signed in.

## Users and Characteristics

<Identify the various users that you anticipate will use this product. Users may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience.

TO DO:

1. Describe the pertinent characteristics of each user. Certain requirements may pertain only to certain users.

3. Distinguish the most important users for this product from those who are less important to satisfy.>

*There are two types of users that interact with the system, general users and system administrators. Each of these users will interact with the system in a different way so each of them has their own requirements. General users include first time users and returning users. New users will need to create a username and password when they first sign in. After the initial interaction with JournalJay, new users will not have to create a username and password again.*

*The general users will most likely have mid-level to advanced technical experience because they use an online journal instead of a traditional journal medium. Avid users can sign in once a day to put their thoughts down in an entry. They may come back in the same day to review entries and moods from other days. They also may decide to use the entry customization in its entirety. Secondary users may only use the site to make an entry 3 to 5 times a week. They would not use the mood tracker or customization options. They may, however, sign in to review their previous journal entries.*

The system administrators can access the internal logic of the site and make any changes they see fit. Administrators can also see all the current users and passwords stored on the database.

## Operating Environment

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist. In this part, make sure to include a simple diagram that shows the major components of the overall system, subsystem interconnections, and external interface

TO DO: As stated above, in at least one paragraph, describe the environment your system will have to operate in. Make sure to include the minimum platform requirements for your system. >

On the server side, the components of the application must function within a Linux operating system environment, namely Ubuntu. On the client side, the components of the application must function within common web-browser environments. These browsers will minimally include:

* Apple Safari 11+
* Google Chrome 86+
* Microsoft Internet Explorer 11+
* Mozilla Firefox 84+

## Design and Implementation Constraints

<Describe any items or issues that will limit the options available to the developers. These might include: hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer’s organization will be responsible for maintaining the delivered software).

TO DO: In this section you need to consider all of the information you gathered so far, analyze it and correctly identify relevant constraints.>

*Due to the lack of database experience of the developers of this project, the journal site application will use a basic database to manage the usernames, passwords, and journal entries. The database will rely on the user’s browser having JavaScript functionality. The database will also reside locally on the user’s computer. The application uses a model view control system to organize the code. The languages used for the application are JavaScript and HTML/CSS.*

## User Documentation

<List the user documentation components (such as user manuals, on-line help, and tutorials) that will be delivered along with the software. Identify any known user documentation delivery formats or standards.

TO DO: You will not actually develop any user-manuals, but you need to describe what kind of manuals and what kind of help is needed for the software you will be developing. One paragraph should be sufficient for this section.>

Because the system offers basic functionality, the user documentation component is a Help menu in a designated spot on the web application. Upon clicking the button, the user will get the option of viewing a tutorial with Jay, the Journaling Blue Jay, or submitting an on-line help request. The tutorial will be a separate page with screenshots of each button, and what it does. Alternatively, it could be a screen-recording of a simulated user interacting with the system, with a voice-over narrating the functionality. To submit a help request, the user will simply be instructed to email a specified help account.

## Assumptions and Dependencies

<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project.

TO DO: Provide a short list of some major assumptions that might significantly affect your design. For example, you can assume that your client will have 1, 2 or at most 50 Automated Banking Machines. Every number has a significant effect on the design of your system. >

*The assumptions and dependencies include:*

* The browser the consumer uses has the necessary JavaScript libraries we are using.
* If we decide to encrypt the usernames and password, we will (probably) use the bcrypt libraries for JavaScript. The browser should support bcrypt.
* The browser should be able to handle the underscore.js library.
* The user can have up to 365 journal entries.

# Specific Requirements

## External Interface Requirements

### User Interfaces

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., Cancel) that will appear on every screen, error message display standards, and so on. Define the software components for which a user interface is needed.

TO DO: The least you can do for this section is to describe in words the different User Interfaces and the different screens that will be available to the user. Optional: You may also provide an initial Graphical User Interface design (does not have to be final).>

A user new to the web application should first see a log-in page. To register, they will click a button to go to a registration page. A returning user will see the landing page first when opening the application. Here, they will choose to create a new journal entry or view an old one. The “A” icon is the button the user presses to access their account page, and the “?” icon is the button the user presses to access the help menu.

Every user’s account page will display their e-mail address, username, and password, and they will have the option to change these fields for their own account.

The page for creating a new journal entry includes title, date, body text, and mood-tracker sections. This allows the user to name their journal entry and begin typing the content of the entry. The date will be generated by the web app; it will not be edit-able. The mood-tracker will be a gallery of emoticons portraying different moods. The user can select one for each journal entry.

The page for viewing previous entries will display each entry as an icon. The icon will include the title given by the user, a picture of their mood if they selected one, and the date created. Upon pressing a journal entry, the user will be taken to the view-only journal entry page.

### Hardware Interfaces

<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware. You are not required to specify what protocols you will be using to communicate with the hardware, but it will be usually included in this part as well.

TO DO: Please provide a short description of the different hardware interfaces. If you will be using some special libraries to communicate with your software mention them here. In case you have more than one hardware interface divide this section into subsections.>

*The user will have a computer with a keyboard, mouse, and monitor. The keyboard will be used to input journal entries, usernames, and passwords. The mouse will be used to validate any fields such as accepting a username and password. The mouse will also be used to choose from any options given to the user such as choosing a mood for the day. The monitor will show the site, any messages from the site to the user, and the journal entries. JournalJay has no effect on the RAM or other hardware of the user system.*

### Software Interfaces

<Describe the connections between this product and other specific software components (name and version), including databases, operating systems (Windows? Linux? Etc…), tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.

TO DO: The previous part illustrates some of the information you would usually include in this part of the SRS document. To make things simpler, you are only required to describe the specific interface with the operating system.>

The

### Communications Interfaces

<Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on. Define any pertinent message formatting. Identify any communication standards that will be used, such as FTP or HTTP. Specify any communication security or encryption issues, data transfer rates, and synchronization mechanisms.

TO DO: Do not go into too much detail but provide 1-2 paragraphs where you will outline the major communication standards. For example, if you decide to use encryption there is no need to specify the exact encryption standards, but rather, specify the fact that the data will be encrypted and name what standards you consider using. >

JournalJay will be web based so we will use browser handled encryption (HTTPS). JournalJay will interact with the user though an internet browser, but the database used will be client side on their computer. We may decide to encrypt the passwords when they are stored on the client computer. If we encrypt the passwords, we will consider using bcrypt. Bcrypt is an open source hashing algorithm that is resistant to brute forcing.

## Functional Requirements

*< Functional requirements capture the intended behavior of the system. This behavior may be expressed as services, tasks or functions the system is required to perform. This section is the direct continuation of section 2.2 where you have specified the general functional requirements. Here, you should list in detail the different product functions with specific explanations regarding every function.*

*TO DO: Break the functional requirements to several functional areas and divide this section into subsections accordingly. Provide a detailed list of all product operations related to these functional areas.>*

*Security Requirements:*

* *Each user will have a corresponding username and password.*
* *The username and password will be stored locally on the user’s computer.*
* *The usernames and passwords will be encrypted using bcrypt.*

*Interface Requirements:*

* *The background of the site will a light color either white or light blue.*
* *The typeface of group text will be Calibri.*
* *Any group text will be black*

*Journal Entry Requirements:*

* *The user can only create one journal entry for each day.*
* *The date will be time stamped on the journal entry. (Will the user input the date or will we keep track of that somehow?).*
* *Each journal entry will show in a smaller square within the main window.*
* *The user can only input data within the smaller window.*
* *While the user is creating the journal entry, they can choose the background and typeface of the entry window from a group of presets.*
* *The user can choose a mood from a provided mood selection. The chosen mood will display on the corresponding journal entry.*
* *Once created, the user can only go back to review journal entries.*

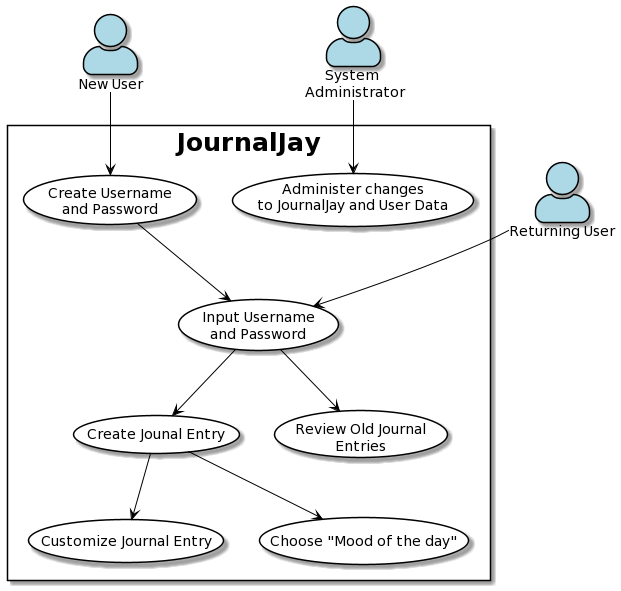
## Behavior Requirements

### Use Case View

<A use case defines a goal-oriented set of interactions between external actors and the system under consideration.

TO DO: Provide a use case diagram which shows the entire system and all possible actors. Do not include detailed use case descriptions (these will be needed when you will be working on the Test Plan), but make sure to include a short description of what every use-case is, who are the actors in your diagram.>

The actors in this use case diagram are the new user, the returning user, and the system administrators. When a new user navigates to JournalJay, they will be prompted to input a username and password or instructed to create a new password. Once a new user creates their username and password, they are considered a returning user. Returning users can create a journal entry, customize their journal entry, choose a “mood of the day”, submit and review old journal entries. System administrators will be able to change the look of the site or the internal data of the site. Admins can also observe, remove, or change user imputed data.



# Other Non-functional Requirements

## Performance Requirements

<If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.

TODO: Provide relevant performance requirements based on the information you collected from the client. For example, you can say “1. Any transaction will not take more than 10 seconds, etc.>

## Safety and Security Requirements

<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product’s design or use. Define any safety certifications that must be satisfied. Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements.

TODO:

* Provide relevant safety requirements based on your interview with the client or, on your expectation for the product.

No personal information including email address or phone numbers will be stored on the site. Each user will have a unique identifier. Due to the limited scope of this project, the username and password will not heavily protected. The journal entries, username, and password will be stored locally. Optional security requirements include: having a way to reset the password and lightly encrypting the usernames and passwords using bcrypt.

* Describe briefly what level of security is expected from this product by your client and provide a bulleted (or numbered) list of the major security requirements.>

The project does not require for the site to be secure. There will be no personal information about the client on the site except the journal entries themselves. The security requirements will be the following:

* The site will be protected by a user created password and username.
* The usernames and passwords will be stored locally on the users’ machine.
* JournalJay will use HTTPS, that will take care of the general web security.
* Optional: encrypt the usernames and passwords with bcrypt.

## Software Quality Attributes

<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.

TODO: Use subsections (e.g., 4.3.1 Reliability, 4.3.2 Portability, etc…) provide requirements related to the different software quality attributes. Base the information you include in these subsections on the material you have learned in the class. Make sure, that you do not just write “This software shall be maintainable…” Indicate how you plan to achieve it, etc.>

# Other Requirements

<This section is **Optional.** Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

Appendix A – Data Dictionary

|  |  |  |
| --- | --- | --- |
| **Acronym** | **Full Term** | **Definition** |
| HTTPS | Hypertext Transfer Protocol Secure | Common method of secure data transfer on the internet. |
| CS | Computer Science |  |
| HTML | Hypertext Markup Language | Standardized markup language used to tag files to create graphic effects on websites. |
| CSS | Cascading Style Sheets | Style sheet language used to describe the presentation of a file written in a markup language. |
| IEEE | Institute of Electrical and Electronic Engineers | Professional association for electronic and electrical engineering. |
| N/A | bcrypt | A password hashing function used to encrypt data. |

Appendix B - Group Log

<Please include here all the minutes from your group meetings, your group activities, and any other relevant information that will assist the Teaching Assistant to determine the effort put forth to produce this document>

10-2-20 10:00am–10:20am Filled out the team agreement form.

10-9-20 9:00am-9:25am Drafted a schedule and rough timeline to complete the SRS document. Discussed concerns and initial ideas in our project requirements.

10-16-20 9:00am-9:45am Sectioned out the SRS document. Set initial deadline of first draft for 10-25-20).

10-30-20 9:45am-10:30am Talked about project specifications and worked on the SRS document.

11-04-20 4:00pm-5:30pm