National College of Ireland

HDSDEV\_SEP23

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SoulJournal

Technical Report



Logo, company name

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**National College of Ireland**

**Project Submission Sheet – 2022/2023**

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Programme: Higher Diploma In Software Development (HDSDEV\_SEP23)

Year: 1

Module: Project

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Project Title: SoulJournal

Word Count (excluding bibliography and appendices):

I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.

ALL internet material must be referenced in the references section. Students are encouraged to use the Harvard Referencing Standard supplied by the Library. To use other author's written or electronic work is illegal (plagiarism) and may result in disciplinary action. Students may be required to undergo a viva (oral examination) if there is suspicion about the validity of their submitted work.

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| **Signature:** | Alexandru Georgescu |
| **Date:** | 10/08/2024 |

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# Table of Figures

A table containing all the figure number, description and page

# Glossary, Acronyms, Abbreviations and Definitions

A table containing all the terms and acronyms used in the document.

# Executive Summary

SoulJournal addresses the challenge of maintaining mental well-being through regular journaling. Many individuals struggle to keep a consistent journaling habit due to lack of motivation, organization, and accessibility([TheHappyJournals](https://www.thehappyjournals.com/hard-to-stick-to-a-journaling-routine/)).

Souljournal is a web-based application designed to simplify and enhance the journaling experience by providing an intuitive and user-friendly platform.

The technical solution involves a React-based frontend integrated with a backend server that manages user authentication, journal entries, and feedback. The application leverages modern web technologies such as React Router for seamless navigation, Bootstrap for responsive design, and RESTful APIs for efficient data handling. Key features include user registration and login, creating and managing journal entries, receiving motivational quotes, and providing feedback.

The evaluation of SoulJournal was conducted through user testing and feedback collection. Users described that the web application is designed in such a way that you’re not distracted by images, useless text, and you’re keeping your focus on the new entry.

Overall, SoulJournal successfully provides a supportive environment for users to maintain their journaling habits, contributing positively to their mental well-being.

# Introduction

## Background

“[Research](https://journals.sagepub.com/doi/abs/10.1177/0146167201277003)” by Laura King shows that writing about achieving future goals and dreams can make people happier and healthier. Similarly, Jane Dutton and Gregory Ciotti [found](https://journals.sagepub.com/doi/abs/10.1177/0956797612439424) that when people doing stressful fundraising jobs kept a journal for a few days about how their work made a difference, they increased their hourly effort by 29% over the next two weeks.” ([Source](https://www.helpscout.com/blog/benefits-of-writing/))

A web-based journaling application also offers unparalleled convenience, allowing users to journal from any device with itnernet access. This flexibility is particularly appealing in today’s fast-paced world, where individuals seek tools that fit seamlessly into their busy lifes.

## Aims

The objective for this project is to build a journaling web application called SoulJournal. The web application will be designed to provide users a convenient and secure platform for personal journaling. SoulJournal will seek to address common barriers such as lack of motivation, organization, and accessibility.

SoulJournal aims to:

1. Promote Consistent Journaling: By offering an easy-to-use interface and motivational features, Souljournal encourages users to maintain a regular journaling habit.
2. Enhance user Experience: Utilizing modern web technologies, the application provides a seamless and engaging user experience, ensuring that users can easily navigate and utilize the platform.
3. Support Mental Health: By facilitating regular journaling, SoulJournal aims to help users manage stress, regulate emotions, and improve self-awareness, contributing to overal mental well-being.
4. Ensure Accessibility: SoulJournal is designed to be accessibile on various devices, ensuring that users can journal anytime and anywhere.

## Technologies

Technologies used in the SoulJournal Project:

1. **React**

* Description: React is a JavaScript library for building user interfaces, particularly single-page applications where you need a fast, interactive user experience.
* Contribution: React is used to build the front-end of the SoulJournal application. It allows for the creation of reusable components, efficient state management, and dynamic rendering of the user interface. This makes the application responsive and interactive.

1. **JavaScript (ES6+):**

* Description: JavaScript is a programming language that enables interactive web pages. ES6+ refers to the latest versions of JavaScript, which include new syntax and features.
* Contribution: JavaScript is the primary language used to write the logic for the application. ES6+ features like arrow functions, destructuring, and async/await make the code more concise and easier to manage.

1. **HTML5**

* Description: HTML5 is the latest version of the HyperText Markup Language, which is used to structure content on the web.
* Contribution: HTML5 is used to structure the content of the SoulJournal application. It provides the basic elements and semantic tags that form the foundation of the web pages.

1. **CSS3**

* Description:CSS3 is the latest version of the Cascading Style Sheets language, used to style HTML elements and control the layout of the web pages.
* Contribution: CSS3 is used to style the SoulJournal application, making it visually appealing and user-friendly. It ensures that the layout is responsive and consistent across different devices.

1. **Bootstrap**

* Description: Bootstrap is a popular front-end framework for developing responsive and mobile-first websites.
* Contribution: Bootstrap is used to quickly design and customize responsive web pages. It provides pre-designed components and a grid system that helps in creating a consistent layout and styling across the application.

1. **React Router**

* Description: React Router is a library for routing in React applications. It allows for navigation between different components and views.
* Contribution: React Router is used to manage the navigation within the SoulJournal application. It enables users to move between different pages(“Home”, “Journal”, “Quotes”) without reloading the entire application.

1. **Node.js**

* Description: Node.js is a JavaScript runtime built on Chrome’s V8 JavaScript Engine. It allows for server-side scripting using JavaScript.
* Contribution: Node.js is used for the back-end of the SoulJournal application. It handles server-side logic, database interactions, and API requests, enabling a seamless connection between the front-end and back-end.

1. **Express.js**

* Description: Express.js is a web application framework for Node.js, designed for building web applications and APIs.
* Contribution: Express.js is used to create t he server and define the API endpoints for the SoulJournal application. It simplifies the process of handling HTTP requests and responses.

1. **MongoDB**

* Description: MongoDB is a NoSQL database that stores data in JSON-like documents.
* Contribution: MongoDB is used to store the data for the SoulJournal application, such as user entries, quotes, and other journal-related information. Its flexible schema allows for easy storage and retrieval of data.

1. **Mongoose**

* Description: Mongoose is an Object Data Modeling(ODM) library for MongoDB and Node.js
* Contribution: Mongoose is used to interact with the MongoDB data base. It provides a schema-based solution to model the application data, making it easier to validate and manage.

1. **Visual Studio Code**

* Description: VS Code is a source-code editor developed by Microsoft. It includes support for debugging, embedded Git control, syntax highlighting, intelligent code completion, and more.
* Contribution: VS Code is the development environment used to write and manage the project’s code. Its features like extensions and integrated terminal puts in order the development process.

1. **Git**

* Description: Git is a distributed version control system used to track changes in source code during software development.
* Contribution: Git is used for version control in the SoulJournal project. It allows multiple developers to collaboarte, track changes, and manage different versions of the codebase.

These technologies work together to create a full-stack web application that allows users to create, manage, and view journal entries.

## Structure

Brief overview of each chapter

# System

## Requirements

This section will be similar to your original requirements specification. Requirements have probably evolved somewhat since. Where this is the case explain what changed and why.

### Functional requirements

### Data requirements

### User requirements

### Environmental requirements

### Usability requirements

## Design and Architecture

Describe the design, system architecture and components used. Describe the main algorithms used in the project. (Note: use standard mathematical notations if applicable).

An architecture diagram may be useful. In case of a distributed system, it may be useful to describe functions and/or data structures in each component separately.

## Implementation

Describe the main classes/functions used in the code. Consider to show and explain interesting code snippets where appropriate.

## Testing

Describe any testing tools, test plans and test specifications used in the project

## Graphical User Interface (GUI) Layout

Provide screenshots of key screens and explain.

## Customer testing

Provide evidence for and results of customer testing. This may include ratings or quotes from the customer.

## Evaluation

How was the system evaluated and what are the results? In many cases this will include usage data and user feedback. It may also include performance evaluations, scalability, correctness, etc. depending on the focus of the project.

Quantitative results may be reported in tables or figures. Note that tables have their caption above the table and need to be cross referenced in the text (see Table 1). In many cases, tables are better to read if you skip the vertical lines.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Nwithout** | **Nwith** | **Std.-Deviationwith** | **Std.-Deviationwithout** | **p** |
| Records | 100 | 200 | 2.54 | 3.97 | .002 |
| Data (GB) | 100 | 200 | 2.54 | 3.97 | .002 |
| Speed | 100 | 200 | 2.54 | 3.97 | .002 |

Table 1: Performance with and without caching

Figures have their caption below the figure as shown in Figure 1. Make sure that if you use colour, the figure is still readable when printed in black & white, e.g., by using additional symbols, patterns, etc.



Figure 1: Learning gain across different experimental groups

# Conclusions

Describe the advantages/disadvantages, opportunities, and limits of the project.

# Further development or research

With more resources, where could the results of this project lead to?

# References

It is recommended that students use the APA, Berkeley, Harvard or other internationally approved style. Here is an example of the APA citation style:

Wilcox, R. V. (1991). Shifting roles and synthetic women in Star Trek: The Next Generation. *Studies in Popular Culture, 13*(2), 53-65.

In the text this article can be cited as “Wilcox (1991)” or “(Wilkox, 1991)”.

References to websites must include the access dates.

The NCI library provides a guide on referencing

<https://libguides.ncirl.ie/referencingandavoidingplagiarism>

# Appendix

## Project Proposal

## Project Plan

## Requirement Specification

## Monthly Journal

## Other Material Used

Any other reference material used in the project for example evaluation surveys, etc.