# Software Requirements Specification

# PRJ566 – Fall 2024

# PRJ566 – Team No: 5

# Name of Project:  BeBetter

# Project Leader:

Gabriel Mebratu

**Last updated:**

09/16 - Initial upload and Work division

09/22 - Introduction and Project Proposal

09/28 - Functional and Non-Functional Requirements

10/04 - Project Scope and System Risks

10/06 - Prototypes and UI mockups

**Team Members:**

**1. Danylo Vityk**

**2. Devon Connelly**

**3. Gabriel Mebratu**

**4.**  **Mohamed Lalji**

# TABLE OF CONTENTS

**Part 1**

1. **Introduction/Overview - Document Information**
   1. **Document Authors**
   2. **Document Conventions**
   3. **Document Purpose**
   4. **Intended Audience**
   5. **Group Agreement**
2. **Project Overview**
   1. **Project Proposal**
   2. **Stakeholders and Users**
   3. **Functional Requirements**
   4. **Nonfunctional Requirements**
   5. **Project Scope**
   6. **System risks**
   7. **Operating Environment**
   8. **UI/UXD Interface Mockups**

# 1 - Introduction/Overview - Document Information

## 1.1 Document Authors

|  |  |  |
| --- | --- | --- |
| **Name** | **Role** | **Email** |
| Mohamed | Front-End Developer | [mlalji@myseneca.ca](mailto:mlalji@myseneca.ca) |
| Devon | Project Manager | Dconnelly@myseneca.ca |
| Danylo | Back-End Developer | Dvityk@myseneca.ca |
| Gabriel | Marketing Manager | Gmebratu1@myseneca.ca |

## 1.2 Document Purpose

The main purpose of this document is to provide the shareholders and External stakeholders with a brief idea of the purpose, goals, and importance of BeBetter. The document will also include a very detailed outline of the functional and non-functional requirements. Finally, it will serve as a blueprint for the developers so that they have a clear understanding of the expectations and quality of work that is needed from them.

## 1.3 Intended Audience

**Project Stakeholders:**

Internal Stakeholders such as the CEO, Construction Manager, and other administrative personnel require up-to-date project details and schedules to ensure effective decision-making.

External Stakeholders such as the end-users, sponsors, and business partners interested in understanding the purpose and functionality of BeBetter.

**Development Team:**

The developers and technical personnel involved in creating, testing, and maintaining BeBetter. The document serves as a blueprint for them to ensure all functional and non-functional requirements are met with clear expectations on deliverables.

**End-Users:**

Users such as Schedulers, Cost Accountants, and other individuals utilizing the system to streamline project management tasks and improve overall efficiency.

Testers:

Quality assurance teams and testers need to understand the scope, functionality, and expected behavior of the system to create effective test cases and ensure software quality.

Management:

Project leaders and team managers who will monitor progress, timelines, and adherence to project goals, ensuring the final product aligns with the initial vision.

## 1.4 Group Agreement

**TEAM AGREEMENT**

**Team #: 05**

**Project Title: BeBetter Self Improvement App**

**Project Time Frame: 8 months**

**Team Members:**

**Danylo Vityk**

**Devon Connelly**

Gabriel Mebratu

Mohamed Lalji

**Team Leadership:** Gabriel Mebratu

**Team Functions:**

* *Share info through MS Teams and meetings.*
* *Work proactively, anticipating potential problems and working to prevent them.*
* *Keep all team members informed of information related to the project.*
* *Focus on what is best for the entire project team.*

**Team Meetings: Wednesday after lectures, and Fridays after labs.**

**Team Problems: Will first be discussed and attempted to be resolved between team members, if problem remains will discuss with professor.**

**Team Commitment**

**The undersigned members agree to work together on the project until the end of the PRJ666 next Semester. They recognize that as a team and individually they are responsible for the quality of all deliverables.**

**Name Date**

|  |  |
| --- | --- |
| Devon Connelly | Sept 21 2024 |
| Danylo Vityk | Sept 21 2024 |
| Gabriel Mebratu | Sept 22 2024 |
| Mohamed | Sept 21 2024 |

# ShapeShapeShapeShape2 - Project Overview

## 2.1 Project Proposal

Project Background

Bebetter is being developed as a response to the growing demand for personalized self-improvement tools that help people navigate their personal and professional growth journeys. We live in a world where people are consistently seeking to optimize various aspects of their life, from financial to mental health to physical well-being, there is a clear gap in the market for a platform that doesn’t offer only generic advice, but customized guidance based on each users' individuals needs and goals.

The self-help platforms that currently exist provide tools that are much more isolated and very few provide the holistic approach that integrates personalized insights, recommendations and connections to relevant communities. BeBetter seeks to fill this gap by creating a platform that empowers users to take control of their life and understand the areas they are excelling in and the areas they need to improve, while also providing connections to the resources and communities that can encourage or facilitate this growth.

**Problem Statement**

|  |  |
| --- | --- |
| The Problem of: | Lack of personalized self-improvement tools that use machine learning/Ai algorithms that provide actionable insights based on personal needs |
| Affects: | Individuals seeking apps for personal growth, product and service providers, and communities looking for like-minded people. |
| The impact of which is: | Users struggle to find guidance and resources, limiting their potential for growth and making it harder for providers to connect with their target audience. |
| A successful solution would: | Use AI/Machine learning to provide users with:   * Personalized feedback * Relevant product recommendations and community connections * Enhancing personal development and engagement. |
|  |  |

**Product Vision**

|  |  |
| --- | --- |
| For | Individuals who seek to improve their personal and professional lives through guided self-improvement. |
| Who | Individuals who are overwhelmed by the number of self-help options available and seek personalized software apps as am aid that matches their unique interests and goals. |
| BeBetter | Is a personalized self-improvement application. |
| That | Delivers a customized experience that offers specific and tailored insights and recommendations aligned with each user’s interests, strengths, and areas for growth based on their user profiles. |
| Unlike | Other apps like Headspace, and MyFitnessPal that narrow down on specific aspects without personalizing the experience for user needs, BeBetter aims to simplify self improvement by integrating multiple areas such as fitness, health, and productivity into one application, adapting to each user's unique needs and goals. This reduces the necessity of utilizing multiple apps to target different areas of improvement, providing a more streamlined approach towards self improvement. |
| Our product | Delivers a personalized user experience by continuously adapting recommendations based on user feedback and progress. A key feature is the dynamic user profiles, which capture individual interests, strengths, and areas for growth. As these profiles are modified as the users goals and needs change over time, it ensures that the insights provided remain relevant and tailored to each user. The app also encourages community engagement, enabling users to connect with like-minded people for support and accountability in their self-improvement. Additionally, BeBetter integrates with third-party services like financial apps and fitness trackers, simplifying and streamlining efforts in different areas of self improvement. |

## 2.2 Stakeholders and Users

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **StakeHolder Group** | **Role** | **Interest Level (1-10)** | **Influence Level (1-10)** | **Notes** |
| Individual Users (Primary Users) | Users seeking personal growth | **10** | **7** | Core users will rely on the platform for personalized recommendations and insights. |
| BeBetter Development Team | |  | | --- | | Internal Stakeholders |  |  | | --- | |  | | **8** | **8** | |  | | --- | | Responsible for building and maintaining the platform, involved in technical execution. |  |  | | --- | |  | |
| BeBetter Product Management | Internal Stakeholders | **9** | **9** | Oversees the project’s direction, ensuring alignment with business goals and user needs. |
| AI/Machine Learning Specialists | Internal Stakeholders | **9** | 8 | Focused on creating and optimizing AI-driven recommendation systems to personalize user experiences. |
| Wellness Experts (mental, physical health) | External Stakeholders | **7** | **6** | |  | | --- | |  |  |  | | --- | | Provide expertise on wellness, informing content and service quality. | |
| Content Providers (articles, podcasts, courses) | External Stakeholders | **6** | **5** | Offer the resources (articles, podcasts, courses) integrated into the platform for user consumption and growth |

### **Key Insights:**

* **Individual Users** are the highest interest group since they directly benefit from the platform's offerings, though they have less influence over decision-making.
* **BeBetter Product Management** holds significant influence as they guide the overall project strategy and ensure user needs are met.
* **AI/Machine Learning Specialists** play a crucial role in delivering personalized recommendations, impacting user satisfaction and platform effectiveness.
* **Wellness Experts** and **Content Providers** have moderate influence, contributing content and expertise that enhance the platform’s value.

## 2.3 Functional Requirements

## 

**User Registration and Login**

Users must be able to register an account and log in using secure authentication methods. Consider 2FA or biometrics. (AWS Cognito)

**Profile Creation**

Users need a form to input detailed personal information, including interests, strengths, and areas in their life they want to improve (Amazon DynamoDB).

**Personalized Dashboard**

A dashboard should provide users with real-time insights into their progress, showing areas where they are excelling and where they need to improve (AWS Quicksight).

**Recommendation Engine**

The system should offer personalized recommendations for products, services, and communities based on the user’s profile data using machine learning/Ai. (OpenAI api):

* The platform should utilize AI and machine learning to provide personalized self-improvement suggestions based on each user's profile data, including interests, strengths, and areas for growth.
* Users will receive customized feedback and guidance that reflects their progress in areas like fitness, mental health, and productivity.
* These recommendations will adapt in real-time as users update their profiles or advance through different stages of their personal development.

**Progress Tracking**

Users should be able to track their progress over time with visual elements like graphs, charts, and reports. Results generate a grade for each topic based on progress in comparison to goals. (Amazon personalize)

**Community Connection**

Functionality to connect users with relevant groups, forums, or communities for support and networking. When it’s possible, have the ability for users to stay in the app rather than being linked to another web page.

**Notifications and Alerts**

The app should send notifications to keep users informed about their progress, new recommendations, or community events.

**Content Library**

The app should provide access to resources, tools, and guides for various self-improvement areas. General library of all resources so users can find areas that they can add to their future goals.

## 2.4 Nonfunctional Requirements

### 1. Performance

1.1. The app must respond to user inputs under 3 seconds for a smooth user experience and increased retention.  
 1.2. The system should support at least 5000 users without hindering performance.

### 2. Scalability

2.1. The application's architecture must be designed to allow for scaling as the number of users grows, accommodating increased data and processing needs.

### 3. Security

3.1. User data must be protected through encryption and secure authentication methods.  
 3.2. The app should comply with data protection regulations.

### 4. Usability

4.1. The app interface must be simple and user-friendly, enabling users to complete tasks efficiently with minimal effort.  
 4.2. Accessibility standards must be met to ensure usability for all individuals.

### 5. Reliability

### 5.1. The app should maintain a high level of reliability, ensuring that users can consistently access the platform without unexpected downtime. 5.2. System backup and recovery processes must be in place to prevent data loss.

### 6. Maintainability

6.1. Application code should be documented to help facilitate future updates and maintenance.  
 6.2. The system should support updates without significant downtime.

### 7. Compatibility

7.1. The app must be compatible with various devices and operating systems (iOS, Android, web).  
 7.2. It should support integration with multiple third-party services and APIs.

### 8. Support

8.1. The app should support multiple languages to cater to a diverse user base.  
 8.2. Users should be able to switch languages easily within the settings of the application.

## 2.5 Project Scope

The project will develop a personalized self-improvement app to help users track their growth in areas like fitness, productivity, and mental health. The app will deliver tailored insights using AI and machine learning, while also enabling users to connect with supportive communities.

* Deliver personalized recommendations to improve user engagement by 50%.
* Ensure the app runs smoothly across iOS, Android, and web platforms.
* Increase user progress tracking accuracy to 90%.
* Facilitate user engagement by connecting them to at least one relevant community group.
* Achieve a 4.5-star rating or higher in app stores after launch.
* The app becomes the primary self-improvement tool for at least 60% of users.

**Project Boundaries**

**Within Scope:**

* Build a personalized dashboard for users to track their progress and receive recommendations.
* Develop the AI-based recommendation engine to provide tailored guidance in real-time.
* Connect users with relevant communities for support and networking within the app.
* Ensure compatibility with third-party services (fitness trackers, financial apps).
* Provide user-friendly interfaces across mobile and web platforms.
* Create training materials and tutorials to guide users through the app’s features.

**Out of Scope:**

* Developing advanced physical device integrations (e.g., IoT fitness devices).
* Providing licensed or paid third-party content for specific self-help areas.

**Project Deliverables:**

* A fully functional, AI-driven self-improvement app (iOS, Android, web).
* Personalized dashboard with user progress tracking and insights.
* Integrated community feature for user engagement.
* Documentation for app usage and setup.
* User feedback reports on recommendations and community features.

**Success Criteria:**

* At least 90% of users report improvement in personal growth areas using the app.
* The app achieves a minimum 4.5-star rating in app stores.
* User engagement with community groups increases by 50% within 3 months.
* System performance supports 5000+ active users without degradation.

**Project Assumptions:**

* AWS infrastructure is available for hosting and scaling the app.
* AI and machine learning systems (OpenAI API) will be available and function as expected.
* Users will be able to easily create profiles and track their progress.
* No additional licensing or external software will be required beyond what’s already scoped.

**Project Risks:**

* AI/ML recommendations may not be as accurate or useful as expected without sufficient data.
* User engagement might not reach expected levels if the community features are underutilized.
* The app may need to scale faster than planned if the user base grows rapidly.
* Users might find the personalized recommendations overwhelming or too specific.

**Project Constraints:**

* The budget is $50,000.
* The app must be launched within 6 months to meet market demand.
* The app must meet data protection standards (GDPR, HIPAA) to ensure user privacy.

## 2.6 System Risks

|  |  |  |
| --- | --- | --- |
| **Risk** | **Description** | **Response** |
| Data Security Breach | User profile data could be exposed in a breach. | Implement encryption protocols, two-factor authentication, and ensure compliance with other data protection regulations. |
| AI/ML Recommendation Errors | Inaccurate or irrelevant suggestions might be generated by the AI/ML engine. | Regularly tune the recommendation engine based on user feedback and performance to improve accuracy. |
| Scalability Challenges | As the user base grows, the platform might struggle to handle the increased load. | Design scalable infrastructure from (AWS or Azure) and implement scaling features to handle things like traffic spikes. |
| User Data Loss or Corruption | System failures might result in the loss of user profile and progress data. | Implement regular backups and recovery procedures, ensuring consistency across all servers. |
| Third-Party Content Provider Issues | External providers may fail to update or deliver content consistently. | Establish contracts with providers and maintain a diverse set of content sources. |
| Dependency on External APIs | Third-party services and APIs like 2 factor authentication may become unavailable. | Build fallback mechanisms and redundancy options for critical third-party services and monitor service regularly. |
| |  | | --- | | **Algorithm Bias** |  |  | | --- | |  | | AI/ML algorithms could unintentionally provide biased recommendations. | Regularly test algorithms for fairness and bias, and incorporate diverse datasets to limit skewed outputs |

## 2.7 Operating Environment

**Hardware Environment:**

Server: Hosted on scalable servers able to handle real-time data processing and secure storage.

Client Devices: Supports iOS and Android smartphones and tablets, as well as modern web browsers (Chrome, Firefox, Safari).

**Software Environment:**

Mobile Platforms: Developed for iOS and Android using native technologies for optimal performance.

Web Platform: Accessible by modern web browsers with responsive design for various screen sizes.

Database: Uses a distributed database system to store user profiles, progress data, and analytics securely.

**Security Environment:**

Data Encryption: All sensitive data is encrypted to protect sensitive user and application information.

Authentication: Secure user authentication with multi-factor authentication and third-party login options.

Data Integrity: Ensures data integrity with regular backups and secure storage protocols.

Security Assessment: Regular security checks and assessments to prevent unauthorized access and data breaches.

**Compliance Environment:**

Data Protection: Fully compliant with privacy regulations and laws regarding data protection and user privacy.

Financial Data: Adheres to industry standards for secure handling of any necessary financial data.

Accessibility: Meets accessibility standards to support all users and ensures inclusivity across all devices.

## 2.8 UI/UXD Interface Mock-ups

<https://www.figma.com/design/P8s0zJFr2FPHgl72hn71ZO/Untitled?node-id=0-1&t=OSVpWtmt3Gdx7lZs-1>



