Software Requirements Specification

Sleep Fixer App

Group 6

Dang Nguyen Rafael Caldera Yohei Oya Yuanwei Chen

November 2025

Contents

Revision History

Name	Date	Reason for Changes	Version
Yuanwei Chen	1/4/2026	SRS document creation	1.0.0

1 Introduction

1.1 Purpose

A major issue plaguing modern societies and their economies is the sleep crisis. It is a global issue that that often goes unnoticed and unrecognized, partially due to being severely under reported. As a consequence of neglecting this major issue, many individuals fall victim to sleep deprecation, or even critical sleeping disorders such as insomnia and sleep apnea.

To help raise awareness to this problem and directly combat the sleeping issues interfering with people's lives, our group has dedicated ourselves to discovering possible solutions to this problem. Therefore, the purpose of this project is to develop and provide a useful tool to help those struggling to get enough sleep. The name of our project is called the Sleep Fixer App. This sleeping app will allow users to set up a scheduled sleeping plan to ensure that they are getting adequate sleep.

This SRS document serves to highlight to our various stakeholders what requirements our app is expected to fulfill. They include the app's functionality, features, and constraints. As such, the expected behaviors of our system are also to be documented. Outlined by the document are the external interface requirements, such as the user and software interfaces, and the legal and ethical considerations.

Essentially, this document will act as a formal agreement to our stakeholders of what our application must be able to do.

1.2 Intended Audience

- Developers: To understand what feasible functions and features need to be implemented
- UI Designers: To assist in forming an interface that supports the required functions and features
- Testers: To know what functionalities to be testing for, and then create appropriate test runs to validate them
- Project Managers: To grasp the project scope and keep track of progress, while making necessary adjustments
- End Users/System Owners/External Stakeholders: To learn about more about the application and what it can do
- Data Analysts: To acknowledge the legal and ethical boundaries of the collected data

1.3 Software Overview

1.3.1 Availability

The software is a mobile app, available on both Android and iOS devices. The app features an intuitive UI to help users easily get started.

1.3.2 Features

Users will be able to input their current sleeping patterns, along with their desired sleeping goal, and the app will prepare a calculated schedule for the user to follow. These calculations will be decide by the user based on 2 selectable options. Additionally, users will be able to organize their sleeping plans based on a planner within the app. The app will also utilize an chat-bot AI trained on Harvard sleep studies to answer any questions related to sleep.

1.3.3 Objective

Through the creation of sleeping plans, the intention is that the user will be motivated to follow the provided calculated schedules and eventually reach their desired sleep goal. These three screens are:

2 External Interface Requirements

2.1 User Interface

When the user opens the app, they will be able to navigate through three different screens. This could be done by swiping the screen or simply selecting a screen's icon at the bottom.

2.1.1 Create Plan Screen

- Section where users select their current sleeping pattern. Using a time slider, they input when they last fell asleep and when they last woke up.
- Section where users select their sleep goal. Using a time slider, they input when they want to go to sleep and when they want to wake up.
- Section where use can select between two options how much minutes they want to shift in the current plan
- Section that provides information about the selected plan. The provided information are the sleep duration, the amount of days needed to reach the sleep goal, and the remaining time needed to shift.
- Button to finalize and create the sleeping plan

2.1.2 View Plans Screen

- See current plan and plans completed in the past
- Options to edit the current plan
- Ability to cancel and delete plans
- Notify user when sleep goal has been achieved

2.1.3 AI Info Screen

- Description of what the AI does
- Provides resources relevant to the app
- List popular example prompts that the user can ask the AI
- Area where the user enters the text prompt for the AI

2.1.4 Dashboard Screen

- Check current progress
- Information about the app and how to use it
- Option to be able to wipe all data from device

2.2 Software Interfaces

2.2.1 Device API

Before the app can be used, it will ask the users for permissions of several functionalities of their device's API.

- Utilize notification system of devices to give user's reminders of the sleep plan
- Make use of the devices' clock and calender to keep track of time and day

3 Legal and Ethical Considerations

3.1 User Data Collection and Privacy

The app collects user data such as user location, user inputs, and the calculation outputs. All this data is only to be stored locally within the user's device. The user can delete this data at any time. The data will not be saved on any cloud, nor will be shared to any third-parties. If the user were to delete the app, all data will be wiped from their device.

3.2 Legal and Ethical Issues

This app only generates recommended sleeping plans to the users which cannot be considered medical advice. This app is not to be used as an alternative to advice provided by medical professionals. Results will vary from individual to individual. Our app must comply with the CCPA protecting users' privacy. Only relevant data is to be used by the app; no personal information is to be collected.

Glossary

- SRS - Software Requirement Specification
- UI - User Interface
- CCPA - California Consumer Privacy Act
- API - Application Programming Interface