

Lab 2: System Requirements Specification

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CS 411W

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November 8, 2024

Version 2

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1 Introduction

1.1 Purpose

The purpose of this system requirements specification is to outline the requirements to develop a web application called KnowTime. KnowTime is an application that will help students to manage their time more effectively and to track their grades and progress. This document is intended to be a reference for the developers of KnowTime.

1.2 Scope

KnowTime will be an online web application that will help its users to manage their time and track their progress across all of their classes. The application will be written in JavaScript, html, css, Python, and Django, the database will be PostgreSQL. The system will allow students to create a customizable study plan, track their grades, and access resources.

1.3 Glossary

Grade Tracker: Grade tracking will be based on user-inputted grades. It will look at their grades, and the time spent studying, which may be entered by the student or automatically generated if the task was completed during a study session within the website.

It will then generate a graph correlating time spent studying with the grade they received. They will also be able to filter this graph by tags. This will allow students to view a particular class to determine how they can improve. The student will set a goal for the grade and view how they are progressing over time.

Pomodoro Timer: The Pomodoro timer technique was created by Francesco Cirillo in the 1980s while he was a university student. To follow this technique, the student sets a timer for 25 minutes to complete a task. Once the timer goes off, the student takes a 5-minute break and then continues to work again for another 25 mins. After four sessions, the student takes a 15–30-minute break (Scroggs 2022).

Study Plan: A study plan will be generated based on various factors that will be entered by the student. Examples of information entered that will be considered are assignment due dates, exam dates, and times that the student has specified they are busy. Study plans also consider time spent on similarly tagged tasks and the need for breaks between tasks.

Task: A Task is any assignment that the student needs to complete, whether that be a homework assignment, an exam, or just making time to study or gather materials. Tasks can have multiple tags and are created by the student in the web application.

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1.5 Overview

This System Requirements Specification is arranged into sections based on its objective. Section 2 provides the overview of the system. Section 3 has the functional requirements, which is organized by feature.

2 Overall Description

2.1 Product Perspective

KnowTime is expected to be a web application that will allow students to generate a study plan, track their grade progress, and create a customizable timer to allow them to take breaks as they study.

2.1.1 System Interfaces

KnowTime's system interface will be online.

2.1.2 User Interfaces

KnowTime's user interface will be the web interface where they will use a username and password to gain access to the application and its features.

2.1.3 Hardware Interfaces

N/A

2.1.4 Software Interfaces

N/A

2.1.5 Communications Interfaces

KnowTime's communications interface will be through email.

2.1.6 Memory Constraints

N/A

2.1.7 Operations

The operations of KnowTime were discussed in section 2.1.2 User Interfaces.

2.1.8 Site Adaptation Requirements

N/A

2.2 Product Functions

The product functions will be as shown in Table 1.

Feature	RWP	Prototype
Account Management		
User Account	Functional	Implemented
Authentication	Functional	Not Implemented
Access Control	Functional	Partial
User Interface		
Calendar	Functional	Implemented
Pomodoro Timer	Functional	Implemented
Task Board	Functional	Simulated
Study Time Tracker	Functional	Simulated
Grade Tracker	Functional	Simulated
Study Plan	Functional	Simulated
Mental Health Resources	Functional	Implemented
Study Resources	Functional	Implemented
Points System	Functional	Simulated
Content Removal	Functional	Not Implemented
Notifications	Functional	Implemented
Add/Delete Friends	Functional	Implemented
Report Users	Functional	Not Implemented
Flag Inappropriate Content	Functional	Partial
Hide Flagged Content	Functional	Partial

Block User	Functional	Implemented
Direct Messaging	Functional	Not Implemented
New Thread Activity Notification	Functional	Not Implemented
New DM Notification	Functional	Not Implemented
Subscribe to Thread	Functional	Simulated
Community Forum		
Create Discussion Thread	Functional	Simulated
Reply to Thread	Functional	Simulated
View Discussion Thread	Functional	Simulated
Like/Dislike Thread	Functional	Simulated

Table 1: Real World vs. Prototype Table

2.3 User Characteristics

The users of KnowTime will be mostly students trying to manage their time more effectively. Other users include people that want to manage their time better. There will also be an administrator that will reply to any questions in the contact us file and track the forums for any users that need to be blocked.

2.4 Constraints

N/A

2.5 Assumptions and Dependencies

N/A

2.6 Apportioning of Requirements

N/A

