Lab 2 - Schedule Puzzle Product Specification Outline

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1 Introduction

The Software Requirements Specification provides a comprehensive development plan for Schedule Puzzle, a web application designed for users to create personalized schedules. This document will serve as a basis of reference among the development team to ensure a shared understanding of Schedule Puzzle's scope and objectives.

1.1 Purpose

This document outlines the development plan for Schedule Puzzle. It provides detailed information on the core features and functionalities of Schedule Puzzle, such as semi-automatic conflict resolution and custom prioritization. It is intended to be viewed by the application's designers, developers, and investors of Schedule Puzzle.

1.2 Scope

The purpose of Schedule Puzzle is to provide users with an automatic schedule creation tool that helps them manage their time more effectively. By assisting users in creating and prioritizing tasks, Schedule Puzzle aims to eliminate the need for users to manually handle every aspect of the schedule, saving them time and helping them achieve their personal and professional goals more effectively.

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1.3 Definitions, Acronyms, and Abbreviations

Application Programming Interface (API): Software that allows two or more computer programs to communicate.

Amazon Web Services (AWS): Service that provides on-demand cloud computing and APIs to individuals and organizations.

Cascading Style Sheet (CSS): Language used to describe how elements are displayed on a screen.

Comma Separated Value (CSV): A text file format that uses commas to separate values.

Discord: A Voice over Internet Protocol (VoIP) and instant messaging social media platform that allows users to communicate with voice calls, text messages, and sharing files.

Django: Python framework for secure and maintainable websites.

GitHub: An online software development platform for storing, tracking, and collaborating on software projects.

HyperText Markup Language (HTML): Designed for creating web pages.

Integrated Development Environment (IDE): Software application used for software development.

JavaScript: A scripting language for creating dynamic web page content.

Natural Language Processing (NLP): Machine learning used to interpret human language.

PostgreSQL: A relational database management system.

Python: A programming language used to create a variety of different programs.

SQLite: An embedded, serverless relational database management system.

Task: Catch all term for things that need to be completed by the user

1.4 References

Indeed Editorial Team. (2021, February 22). *12 Time Management Problems (and How To Fix Them)*. Indeed. Retrieved from https://www.indeed.com/career-advice/career-development/time-management-problems

Nemko, M. (2021, December 3). *4 Causes of Poor Time Management | Psychology Today*. Psychology Today. Retrieved from https://www.psychologytoday.com/us/blog/how-to-do-life/202112/4-causes-of-poor-time-management

Team Gold. (2023, September 5). Lab 1 Schedule Puzzle Product Outline. Retrieved November 2, 2023 from https://kaypineda.github.io/2023-Fall-CS411W-Gold/labs.html

Prabhu, A. (2022, November 25). *Importance of scheduling tasks and its benefits*. Profit.co. Retrieved from https://www.profit.co/blog/task-management/importance-of-scheduling-tasks-and-its-benefits/

Richardson, B. (2022, October 26). *Time Management Statistics & Facts (New 2022 Research)*. Acuity Training. Retrieved from https://www.acuitytraining.co.uk/news-tips/time-management-statistics-2022-research/

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1.5 Overview

The remaining sections of this document give a general description of Schedule Puzzle, the users' characteristics, and Schedule Puzzle's major functions.

2 Overall Description

Schedule Puzzle is a web application that assists users in prioritizing tasks and creating schedules based on their input. Users can add tasks manually or import them from another source. Schedule Puzzle handles schedule conflicts by alerting users and suggesting schedule adjustments.

2.1 Product Perspective

Schedule Puzzle is a web application that automatically generates schedules based on task information provided by the user. The user can input tasks manually or import them from another calendar. The application handles conflict resolution semi-automatically by sending users notifications to offer schedule change suggestions. Users can prioritize tasks through various options such as flagging, deadlines, completion times, or user-defined categories. Schedule Puzzle offers a customizable priority system that helps users manage their tasks efficiently.

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2.2 Product Functions

Schedule Puzzle will demonstrate the basic functionality of a calendar application and its unique core features, as shown in Figure 1. The basic features are task creation, daily/weekly/monthly calendar view, notes creation within a task, import/export, and notifications. The unique features that will be demonstrated are the automatic schedule creation and semi-automatic conflict resolution. Custom prioritization, natural language processing, and behavioral suggestions will be partially implemented.

Feature	**Real World Product**	**Prototype**
Basic Calendar Functionalities		
Import existing schedules (.ics, .csv)	Fully functional	Fully functional
Export existing schedules (.ics, .csv)	Fully functional	Fully functional
Has daily/weekly/monthly calendar interface	Fully functional	Fully functional
Modify tasks	Fully functional	Fully functional
Create notes inside of tasks	Fully functional	Fully functional
Send reminders/notifications (push, text, email)	Fully functional	Fully functional
Automation, Customization, and Prioritization		
Automatic schedule creation	Fully functional	Fully functional
Semi-automatic conflict resolution	Fully functional	Fully functional
Custom prioritization	Fully functional	Partially functional
Natural language processing	Fully functional	Partially functional
Behavioral suggestions	Fully functional	Partially/Eliminated

Figure 1: Real-World Product vs Prototype

2.3 User Characteristics

The primary users of Schedule Puzzle are individuals who require assistance in managing their daily activities and tasks. These users may have varied technical proficiency but should have a basic understanding of calendar functionality. This group of users will interact with the application frequently to create personal and professional schedules to aid in time management.

The secondary users of Schedule Puzzle are individuals' part of the development team. These users are technically proficient and will be responsible for maintaining and updating the application. This group of users will require access to the application's system functionalities for debugging and updating purposes.

2.4 Constraints

N/A

2.5 Assumptions and Dependencies

N/A