Lab 2 Schedule Puzzle

Pablo Castaneda

Old Dominion University

Professor Thomas Kennedy

December 1, 2023

1 Introduction

The product is called Schedule Puzzle. This is a user schedule creation, automation, and prioritization tool. People in society are consistently flooded with things that they need to do. Often time they will create a plan, but then another event pops up and derails their plans. On other occasions their scheduling was done poorly and there are errors in their plan. Schedule Puzzles goal is to help people with these challenges quickly generate a highly accurate schedule tailored to their needs.

Individuals' struggle with time management is well documented. In a 2022 study of 500 employees across several industries, less than 1 in 5 people (18%) have a proper time management system. (Richardson, 2022). Additionally, about one in five people audit themselves to check if they are accomplishing with their time what they set out to do. Figure 1 is a diagram highlighting the current process that most people use to schedule their tasks. The problem areas of the current process flow are surrounded by a purple box. The biggest issues are with keeping track of all the individual events and not scheduling them in a way which will cause time conflicts.

1.1 Purpose

The purpose of this application is help individuals be more efficient with their time by taking their list of things to do and creating them a schedule that is optimized for their productivity.

1.2 Scope

The goal of Schedule Puzzle is to improve people's productivity and reduce their stress by automating their scheduling process.

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 the 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 that is used 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, server-less 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-timemanagement

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/

1.5 Overview

This product specification details the capabilities and features of the Schedule Puzzle. The information provided in the remaining sections of this document includes a detailed description of the functions, characteristics, and constraints. The specific requirements such as function and performance requirements will be discussed as well.

2 General Description

Schedule Puzzle is a web-based application that is mean to help users be more productive by turning their to-do list into an automated schedule.

2.1 Prototype Architecture Description

- This is a user schedule creation, automation, and prioritization tool.
- This product will be a web page that has a side bar and a calendar.
    - The side bar will be for creating new tasks and adding them to the calendar.
    - The calendar will be a visual aid to review the tasks.
    - There will be export capabilities to send the task to another calendar application as desired.

2.2 Prototype Functional Description

. This product will provide users with a place to store their to-do list, a calendar to manage their schedule, and the option to export their schedule as a csv file.

. Automated scheduling:

The application will automatically schedule the user's to-do list. This includes prioritizing the to-do list tasks based on the characteristics of the task as supplied by the user.

· Importing/ exporting:

The tasks can be imported into the schedule via a csv file and like-wise can be exported as a csv file.

2.3 External Interfaces

- Schedule Puzzle does not require external interfaces.

2.3.1 Hardware Interfaces

- Schedule Puzzle requires a personal computer to interact with the application.

2.3.2 Software Interfaces

- Schedule Puzzle requires Django and SQLite to run.

2.3.3 User Interfaces

- Monitor or integrated screen to display application, and keyboard and mouse for inputs.

2.3.4 Communications Protocols and Interfaces

- Internet access