Lab 1 Schedule Puzzle Product Outline

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Old Dominion University

CS 410, Spring 2023

Professor Thomas Kennedy

April 24, 2023

1. Introduction

- Societal Problem
    - People have difficulty organizing and prioritizing tasks
    - Plans are too rigid and people fail to follow through
- Solution - Schedule Puzzle
    - Web application with automated schedule creation
    - Prioritize selected tasks
    - Semi-automatic conflict resolution

2. Schedule Puzzle Product Description

- Automated schedule creation based on user supplied tasks
    - User inputs name of task, duration, number of repetitions
    - Schedule automatically puts together schedule based on above
- Basic calendar functionalities
    - Import and export calendars
    - Multiple calendar interfaces
    - Label tasks
    - Notify users of tasks
- Prioritization and customization
    - Prioritization based on categories, deadlines, days, times of days
    - Semi-automatic conflict resolution
    - Custom categories for labeling and prioritization

2.1. Key Product Features and Capabilities

- Automate schedule creation based on user supplied tasks and events
- Unique because it allows for automated schedule creation based on user inputs to all individuals
- This product allows for users to input tasks at the start
- As a result, user is also able to help with conflict resolution
- Alleviate rigid schedule creation by allowing users to work together with the system

2.2. Major Components (Hardware/Software)

- Hardware
    - Personal Computer: Desktop or laptop
    - Cellular Device
    - Tablet
- Software
    - Frontend: HTML, JavaScript, CSS
    - Backend: Python
    - Database: Amazon Web Services, PostgreSQL
    - Framework: Django
    - IDE: VSCode
    - Repository: GitHub

3. Identification of Case Study

- Who is this product for?
    - Individuals who struggle with time management

    - Individuals who already use calendar applications
- Why is this product being developed?
    - Opportunities to be productive are often missed and important tasks are often neglected
    - Alleviate stress that comes with schedule creating
- Who else might use this in the future?
    - Students
    - Administration clerks
    - Organization leadership
    - Starting professionals

4. Schedule Puzzle Product Prototype Description

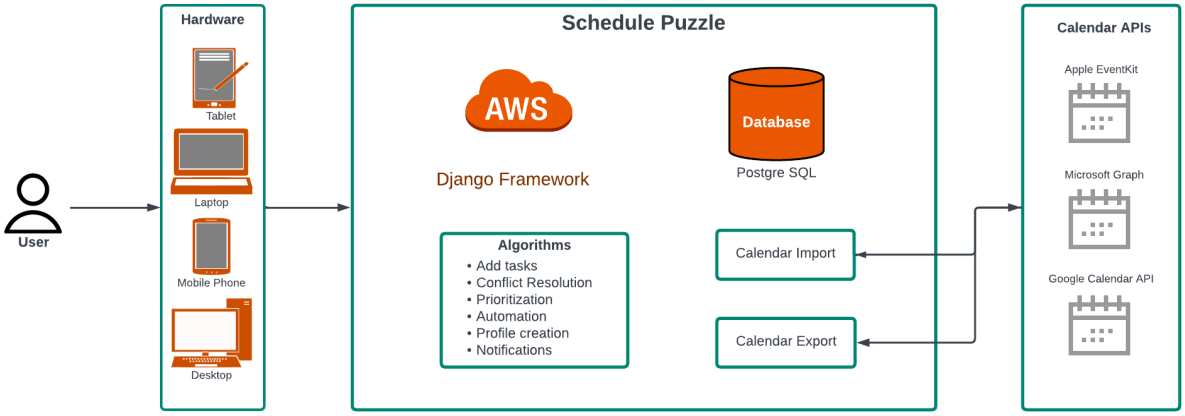
Feature	**Real World Product**	**Prototype**
Basic Calendar Functionalities		
Import existing schedules (.ics, .csv)	Fully functional	Fully functional
Export existing schedules (.ics, .csv)	Fully functional	Fully functional
Has daily/weekly/monthly calendar interface	Fully functional	Fully functional
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

4.1. Prototype Architecture (Hardware/Software)

- Hardware Utilized
    - Personal Computer
    - Smartphone
- Software Utilized
    - Frontend: HTML, JavaScript, CSS
    - Backend: Python
    - Database: Amazon Web Services, PostgreSQL
    - Framework: Django
    - IDE: VSCode
    - Repository: GitHub

- Prototype MFCD:



4.2. Prototype Features and Capabilities

- Program demonstrates schedules can be generated quickly and uniquely to meet individuals needs
- Improve the rate at which people accomplish their high priority tasks
- Brings automatic schedule creation to individuals
- Addresses the risks by carefully considering all potential hazards and tackling them with industry best practices
- Helps people create schedules and helps alleviate stress and errors that come with making schedules

4.3. Prototype Development Challenges

- Learning the skills to implement the Django framework.
- Learning new languages and API's
- Implementing NLP into our product

5. Glossary

- Task: catch all term for things that need to be completed by the user
    - One time task: appointments, meetings

- Recurring task: chores, school, work

6. References

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