

### **Defining the Problem:**

My client is Catherine, a horrendously busy student in junior high. Between soccer practice, debate, math competitions and school, she is hardly able to complete all her tasks in a stress-free manner, much less find time for herself. Almost every day after school, Catherine has an extracurricular activity to follow up with as well as tediously difficult math homework from two separate extracurricular math classes. Still, she has schoolwork to complete, and an impressively busy weekend schedule just to top it all off. Not only this, Catherine suffers from chronic procrastination, resulting in a need for some sort of assistance with managing her valuable time. Due to the constant pressure from my client's family to succeed in all her endeavors and Catherine's own sky-high expectations for herself, my client's inability to complete all her tasks has become a huge stressor and holds the possibility of negatively impacting her mental health. My client is in need of a daily schedule of which she can follow to complete her daily tasks and maintain her grades. The issue that Catherine has is that her schedule is constantly changing. She has different extracurricular activities every day, all of varying lengths and times during the day. Her soccer practice schedule is especially erratic--while most activities are consistent on which day and time they are scheduled during the week, my client's soccer schedule is inconsistent. Therefore, my client needs a program to help her organize her time that is customizable for each individual day.

### **Rationale for Proposed Product:**

Hence, my client and I have concluded that creating a web application which is able to generate a schedule for her based on her day-to-day needs would be of most help. Upon further inquiry, we came to the conclusion that the program must allow her to input the tasks she wants to complete, and how long they will take. Then the program will auto generate a schedule for her to follow. If possible, my client would also like for there to be an option to input the times of some of her fixed activities, such as dance practice, and for her homework and other tasks to be generated around such an activity.

Due to the possible complexity of this program, I have asked a fellow student, Jason Li, who is very proficient in programming, to be my advisor.

For this program I will use:

- Python for all back-end operations since it is the programming language I am most fluent in
- SQL through Python's sqlite3 library in order to store data due to experience using it in class
- Flask and html to create web application for maximized user friendliness

### **Success Criteria**

Program will be user friendly and aesthetically pleasing
Program will ask for user inputs and generate a new schedule
Program will store all schedules within a database

Program will allow user to view past schedules in an easy to understand format
Program will allow user to delete any past schedules
Program will check and output an error message if user inputs a value that results in an error
Program will display a button menu for user to decide their action
Program will display buttons with all schedules as an option when choosing to view a schedule
Program will randomly generate a schedule.

(Word Count: 473)