Project Proposal: Final Project

Software Design, Spring 2018

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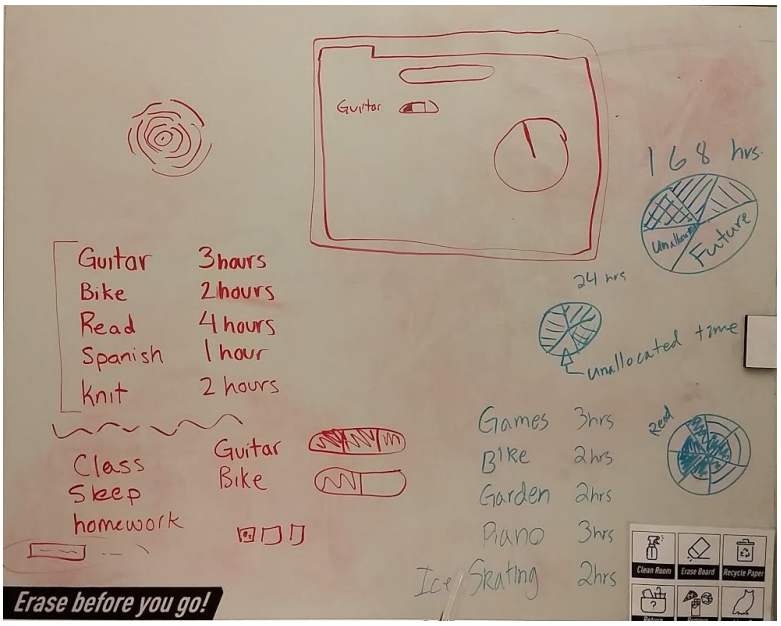

1. **The Big Idea:** What is the main idea of your project? What topics will you explore and what will you generate? What is your **minimum viable product**? What is a **stretch goal**?

The main goal of our project is to create a web app that will help users manage their time and see how it is spent over a specified interval of time. We aim to do this by conveniently categorizing customizable activities as “goal” or “accumulative”. With activities like reading and practicing the piano, it is sometimes difficult to find enough time in your schedule while juggling work, chores, and other daily tasks. We thought another challenge might be figuring out how to spend extra time. We know that many people have things they wish they had more time for. With this web app idea, we try to help users decide at the beginning of a specified time frame (week, month, etc.) what they know they want to accomplish. This way, users can make see how much progress they have made at any given time towards their goal. With just a sum of time as the goal, the user doesn’t feel locked into a specific time frame they have to constantly cut out of their schedule. The goal of this web app would be to

help people manage their time so that they can make time to do the things they know they want to spend their time doing.

2. **Learning Goals:** What are your individual learning goals for this project?

We both agreed coming into this project that we wanted to make something that is practical and easy to use. Luis has a specific interest in making a program that is interactive. He wants to gain familiarity with python input commands and using user information. Anna's individual goal is to explore web app development and graphics. We both want to expand our grasp on python and we are hoping that we will be able to reach a point where we can experiment with our program and refine our product.

3. **Implementation Plan:** This will probably be pretty vague initially. Perhaps at this early juncture you will have identified a library or a framework that you think will be useful for your project. If you don't have any idea how you will implement your project, provide a rough plan for how you will determine this information.

Because we are working towards creating a python Web App, we will likely be using a framework such as Django or Flask. There appear to be many online tutorials for these two frameworks to get us started.

We will start by mapping what functions we'd like our final project to have, and then making sure we are using the right library/ framework for the job. We will likely ask an instructor what frameworks have been used in the past to create a similar product.

We will be utilizing a GitHub repository so that we can work on it separately if need be, but the majority of our progress will likely be made together. We plan to meet to tackle the implementation of larger aspects of the Web App, such as interpreting user input and creating dynamic graphics.

The core of the Web App will be priority, but if time remains we have stretch goals that we'd like to implement. A login, for example, would be useful so that the webapp can be closed and accessed again even from a different device.

4. **Project schedule:** You have 6 weeks (roughly) to finish the project. Sketch out a rough schedule for completing the project. Depending on your project, you may be able to do this in great specificity or you may only be able to give a broad outline. Additionally, longer projects come with increased uncertainty, and this schedule will likely need to be refined along the way.

We broke our project into smaller tasks that we must complete in order to build the program we have in mind. In chronological order, our long-term plan looks like this:

1. Design component that allows the user to create “events”
2. Attach a time that the user associates with each “event”
3. Design and implement a way to display the weekly progress
4. Update the progress based on user input
5. Design and implement a way to visualize the time break down
6. Wrap functions in a web app and design the interface.

We are assuming that we will spend the first four weeks on steps 1-5. At the beginning, we want to focus on functionality and making sure we are able to get all of our features working. We predict that it will take us some time to get used to new areas of python that we have yet to work with in previous projects. Also, we are expecting the web app component to be challenging as well since it is something neither of us have previous experience with. Afterwards, we purposefully planned to give ourselves the last week and a half to focus on the display and presentation of the web app. We think that it will be important for this app to be convenient and user friendly, but also aesthetically pleasing so that users will want to engage with it.

5. **Collaboration plan:** How do you plan to collaborate with your teammates on this project? Will you split tasks up, complete them independently, and then integrate? Will you pair program the entire thing? Make sure to articulate your plan for successfully working together as a team. This might also include information about any software development methodologies you plan to use (e.g. agile development). Make sure to make clear why you are choosing this particular organizational structure.

For this project, we will be utilizing pair programming for the most part. In our experiences, the biggest advancements to the program are usually done when

both members are in the same room. It helps with motivation as well as ideation since both people can bounce ideas off each other and helps to make sure that both partners know how the program works.

We will schedule meetings at such a frequency that we make steady progress on the program. An open line of communication will also be used to keep the partner up to date on any changes made to the program.

6. **Risks:** What do you view as the biggest risks to the success of this project?

The biggest risk for the success of the project is overestimation of what we can do in a 6-week period. We must also be careful of creating an oversaturation of features for the product. Just because it can be done, doesn't mean it needs to be included.

There may also be a rather steep learning curve. Neither of us have created a Web App before, so we are going in somewhat blind. We must be sure to recognize the resources we have available and utilize them when we have questions.

7. **Additional Course Content:** What are some topics that we might cover in class that you think would be especially helpful for your project?

We think databases might be important for retaining information for long periods of time. How to use something like MongoDB or SQLite might be useful in expanding the types of programs we may try to create. If we try to implement a login system on this project, we believe that a database might be important.

Teaching a bit about using graphics might be helpful as well. Just a bit about graphics creation and integrations would be interesting. For example, in this project we are considering creating a dynamic pie chart. This is not something we've encountered before, but we're sure we can figure it out.