University of Manitoba - Faculty of Computer Science

COMP 3020 – Fall 2021

Milestone 3

High-Fidelity Vertical Prototype

Team D

Authors

Reymel Eusebio - eusebior@myumanitoba.ca

Jules Basa - basaj@myumanitoba.ca

Jason Tran - tranndt@myumanitoba.ca

Humayra Anjum Rafi - rafiha@myumanitoba.ca

Alborz Khakbazan - khakbaza@myumanitoba.ca

Instructor

Dr. Celine Latulipe

January 5, 2022

1 Technology Overview

For milestone 3, we used HTML to layout the structure or skeleton of our application. For styling the components of the structure we used CSS. We also integrated JavaScript to make use of the dynamic web technology.

As for additional software, we used Visual Studio Code as our IDE to produce the code for the high-fidelity vertical prototype. The VS code extension Live Server which automatically reloads the server as changes are made in the code which saved us time and effort. In addition, we used GitHub to allow for tracking code changes and convenient team collaboration.

One of the main approaches we ended up using was a grid layout to help with consistency between pages and to alleviate window resizing issues.

As for the libraries, we only used D3.js for the statistics page to implement data driven documents which makes use of interactive data visualizations as shown by the statistics bubbles.

2 Design Deviations and Evolutions

The process of building this prototype as well as the user feedback from the in-class presentation helped us realize how we can improve our design. As a result, we made the following changes:

1. In the paper prototype, we had two buttons on the timer: start and stop. However, now we are using two buttons with start/pause and set/done/stop functions, respectively. This provides multiple functions without cluttering up the timer with too many buttons. In addition, it guides the user through different actions by changing the content and functionality of the buttons. For example, the 2nd button changes to “stop” when the timer is running and to “set” when the timer is stopped. This prevents the user from trying to stop the timer when it is already stopped and same for editing as well.
2. We also avoided too many pop-ups by using toasts instead of dialog boxes for showing states/confirmations and used JavaScript “alert” for input errors. We moved the functionality of setting the timer to playlist length to the music page instead of having a pop up for asking for time length when setting the timer. Dialogue boxes are reserved for critical information that the user must be aware of, or events where the user has to decide how they would like the app to proceed.
3. Thirdly, we used grids for better organization and consistency across pages after reflecting on feedback we received and utilizing what we learned from the lectures.
4. Next, we repositioned the task-project selector to the top of the timer instead of having it at the bottom to make it intuitive to select the task before starting the timer. We also added a warning to remind users to select a task before starting the timer.
5. Lastly, on Statistics screen, we decided to filter by projects/tasks instead of time/semester to make it consistent with the main idea of the app, which is centered around tasks in general, not just academics.

3 Usability “Sales Pitch”

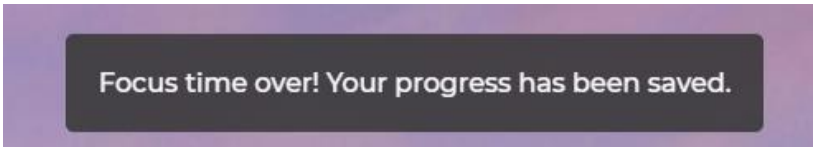
FocusTime is an all-in-one productivity platform that helps make the process of performing and managing everyday tasks and projects much easier and more enjoyable.

Consistency

The use of a grid layout ensures that the user does not have to constantly change where they are focusing on the screen – the main parts of the page always stay centered. The navbar has the exact same look and placement on every page as well, so the user can always recognize it easily.

Feedback

Onscreen toasts remind the user of the current state of the application. Selected options and navbar icons are clearly highlighted to be distinct from others, so the user knows what they have selected. The cursor is changed to a hand pointer when the user hovers over parts that are clickable. Major selections that may frustrate an unaware user, such as stopping the timer early or starting the timer without a task to save to, prompt the user with a confirmation box to ensure they do not accidentally lose progress they wanted to track.

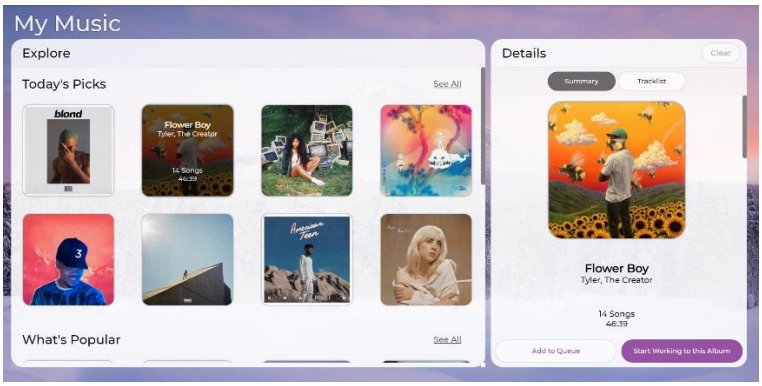


Affordances

The timer on the Timer page is designed like real life stopwatches or timers that users may be familiar with, including a circular progress bar that makes it easy for users to visualize how much time is remaining in their session. In addition, the Progress page is designed similar to a journal, replicating what a user’s current, paper study tracker might look like. As a result of these affordances, new users can become quickly comfortable with the main features of the app, even if they are not tech-savvy.

Visibility

The navbar is distinct and available for users to see at all times so that they always know their navigation options. The grid layout of the application enhances visibility by keeping the main parts of each page centered and parts that are used less frequently on the sides, so that the user understands what is important and has it shown clearly to them.

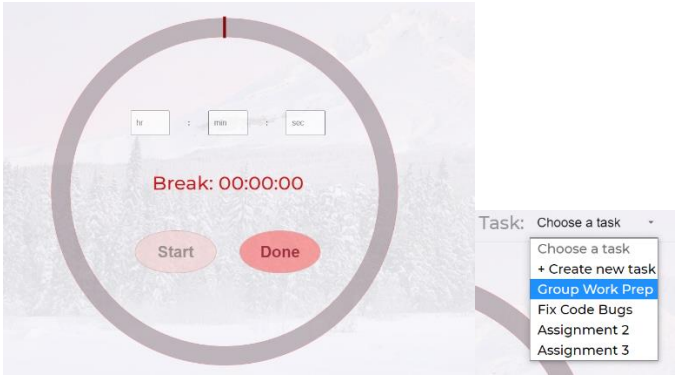


Control and Freedom

The settings page provided for users allows them to change the theme and default home page to their liking. We made use of onscreen toasts where we could, instead of popup boxes which tend to disrupt the user's flow. The app allows users to take breaks, allowing them time to stretch, go to the bathroom, or grab some food if they need it. Users can start a timer with or without choosing tasks/projects, and with or without choosing music, allowing them to approach their work sessions however they please.

Constraints / Error Prevention

Setting a timer prompts the user to enter the hour, minute, and second value separately, so that they do not make errors in the time they want to set or have to worry about formatting. Dialog boxes indicate accepted/valid input type and range (integer range for progress, text input length for new project name, etc.). Dropdown boxes and selections on the setting page provide the user with a set of valid options to pick from, ensuring they only consider options that are actually available to them.



Error Diagnosis / Recovery

The user is alerted when an invalid input is given and reminded of what the valid input should be so that they can try again. The use of toasts throughout also helps keep users aware of the options they have selected just in case they selected something they didn't mean to.

Minimizes Memory Load

The ‘Notes’ box on the Timer page works like a scratchpad, that allows users to keep track of small task-specific reminders, like how to hand in or assignment questions to revisit later. The Progress page keeps track of these notes too, as well due dates so users can focus on the work without worrying about remembering other details. Additionally, tabs like the Progress page and Statistics page can be searched/filtered for results, and results appear as you type, so if you don’t exactly remember the name of the task you’re looking for you can still find it easily.