Well-being as a Measure of User-interface design

Functional Specification

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1. Introduction

1.1 Overview

The product being developed is an app/extension that will track the amount of actions done and time consumed within a social media website or platform. The tracker will display statistics such as “clicks”, “screen time” and “scrolls”. The intended idea behind this is to make the user aware of the amount of time and attention they are spending on social media. The product will work for a social media platform within a web browser, the system is required to be connected to the internet in order to use websites.

1.2 Glossary

Tracker - a built-in database within the program that updates the actions being done.
Clicks - Mouse clicks on the website.
Screen time - The amount of time spent on only the social media platform since opening it.
Scrolls - How many times the user has used their scroll wheel within the platform.

2. General Description

2.1 Product / System Functions

The product will track the user’s activity within a social media platform and display this activity through statistics back to the user in order to allow the user to recognize and see how impactful long periods of time on social media can be to their mental health.

2.2 User Characteristics and Objectives

The users are required to be familiar with using computer appliances such as keyboards and mouses in order for them to successfully browse a social media platform on a computer. The system expects the users that use this program to be able to do so as the intended use of the program is for a social media platform

2.3 Operational Scenarios

The first scenario that a user will run into is opening the program, when done the user will see the track pop up on their screen on top of the website. This tracker will continue to be updated as long as the user is interacting with the platform in some way, therefore from the users perspective the numbers within the tracker will keep going up. If the time/statistics

within the tracker reaches a certain limit (Such as the daily average of 30 minutes) that can be set to the users liking or the default then the program will recommend you to take a break or to turn off the social media itself.

2.4 Constraints

It is going to be difficult to track almost every action within a platform such as mouse movement, certain repetitive movements etc. So we decided to narrow it down to screen-time for this constraint as it will work similarly enough and achieve adequate results.

The design of the tracker needs to be slick and needs to look natural within the platform in order for users to almost not notice it being there, however we want the statistics and the important data to pop out to the users, highlighting the importance of the figures.

3. Functional Requirements

Track and display activities:

Description - The system must be able to track all the activities we desire it to, those being clicks, screen-time and scrolls. It then must continue to visually portray these statistics to the user via the User-Interface design.
Criticality - This requirement is extremely important within the system as it is the backbone of the project.
Technical Issues - There are going to be technical difficulties when it comes to successfully updating the statistics, not only during real-time but also portraying them in a clean and easy to read fashion.

Warn users about statistics

Description - This section of the program is responsible for warning the user once they have reached a certain milestone of one or multiple statistics, it should alert them in a fashion that shows clear urgency and importance.
Criticality - This requirement is also very important as this is the whole other half behind our idea as this is how we try to improve the well-being of our users.
Technical Issues - It's going to be difficult to warn users without scaring them away from using the program, therefore this section should come across in a very important matter instead.
Dependencies - In order for this section to work properly we need the “Track and display activities” to function properly as we are depending on the statistics within that section to trigger this section off.

4. System Architecture

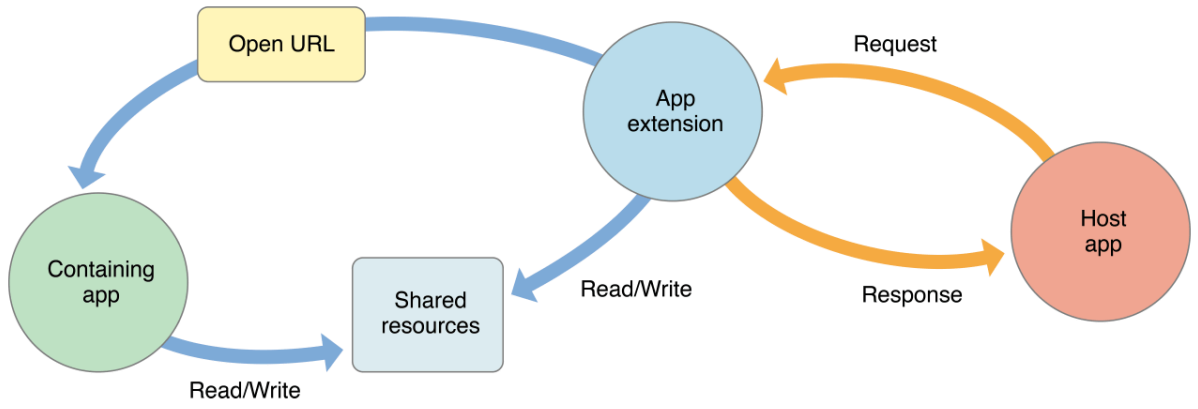
For the backend code we will be using python as both of us are familiar with it the most. Django is a possibility that will be investigated if it is required. As well as that we may use pycharm if we require it. We both have prior knowledge of pycharm as we both have done full stack projects before building interactive websites.

Python, HTML, CSS, and javascript will be used on the frontend. HTTPS will be used to host the frontend. The app/extension will be interactive, making it enjoyable for the user to use. The app/user extension's interface will be straightforward and elegant, ensuring that the user is always aware of the options available to them at any given time.

5. High-Level Design

Our app/extension relies upon the users time spent on a certain platform, this will involve us using a time triggered architecture within our code. An app/ extension with a time-triggered architecture performs one or more sets of activities according to a predetermined and pre-set task schedule. The usage of a single interrupt coupled to the periodic overflow of a timer will normally be used to implement a TT system. A task scheduler might be triggered by this interrupt. The system tasks will then be released by the scheduler at predefined times.

Diagram of our app/extension working simultaneously with



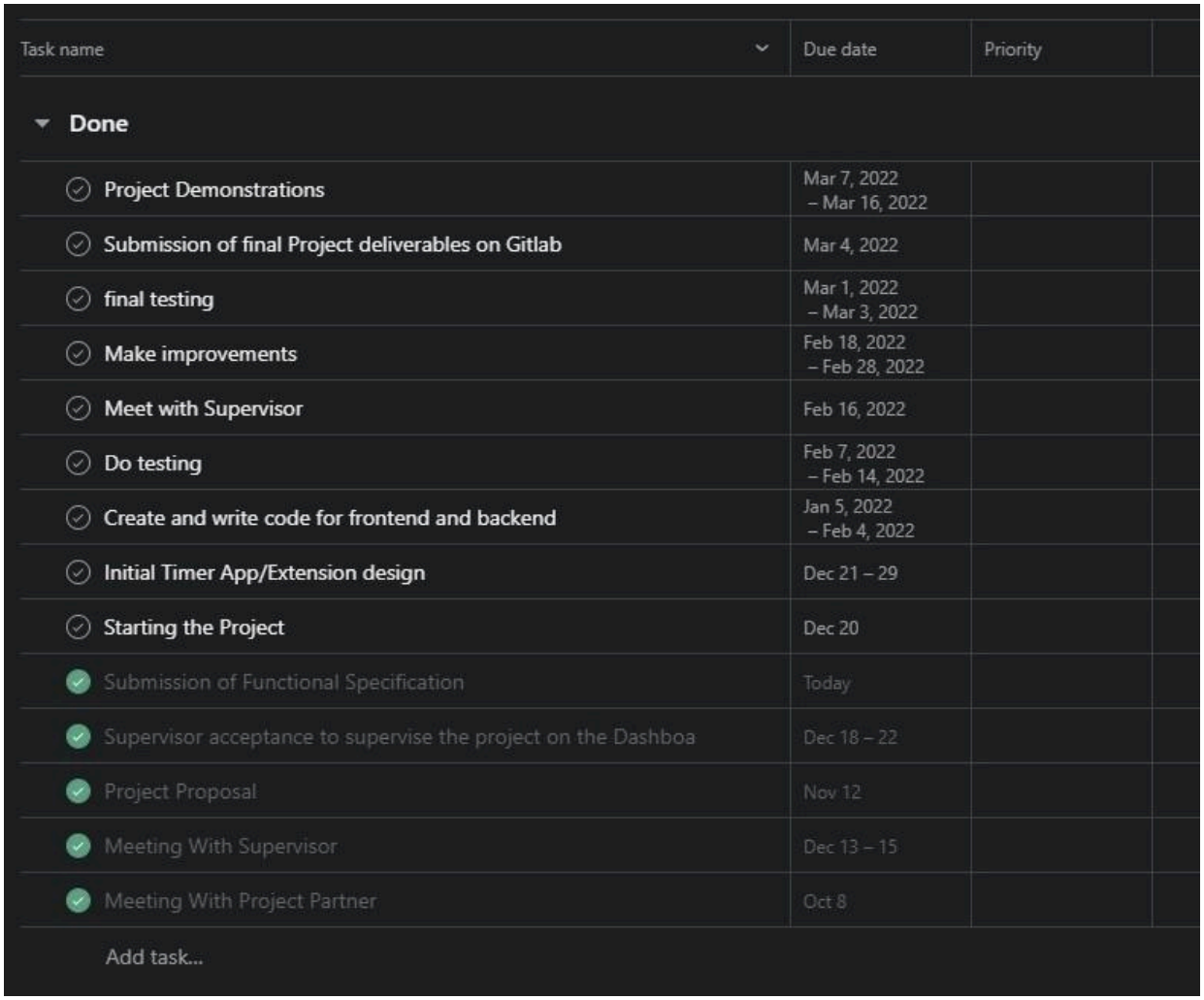
The following steps occur when launching our app/extension.

- The social-media site is open hence initializing the app/extension
- The app/extension starts the timer which is tasked with counting up to a certain time limit.
- When it reaches that limit the app/extension kicks in and locks that social site for a certain period of time.
- Once that period is over the user is allowed back in and the cycle repeats.

This cycle ensures the push for good well being for the user interface as it lessens the users mental strain to be glued to the screen but rather to take a break.

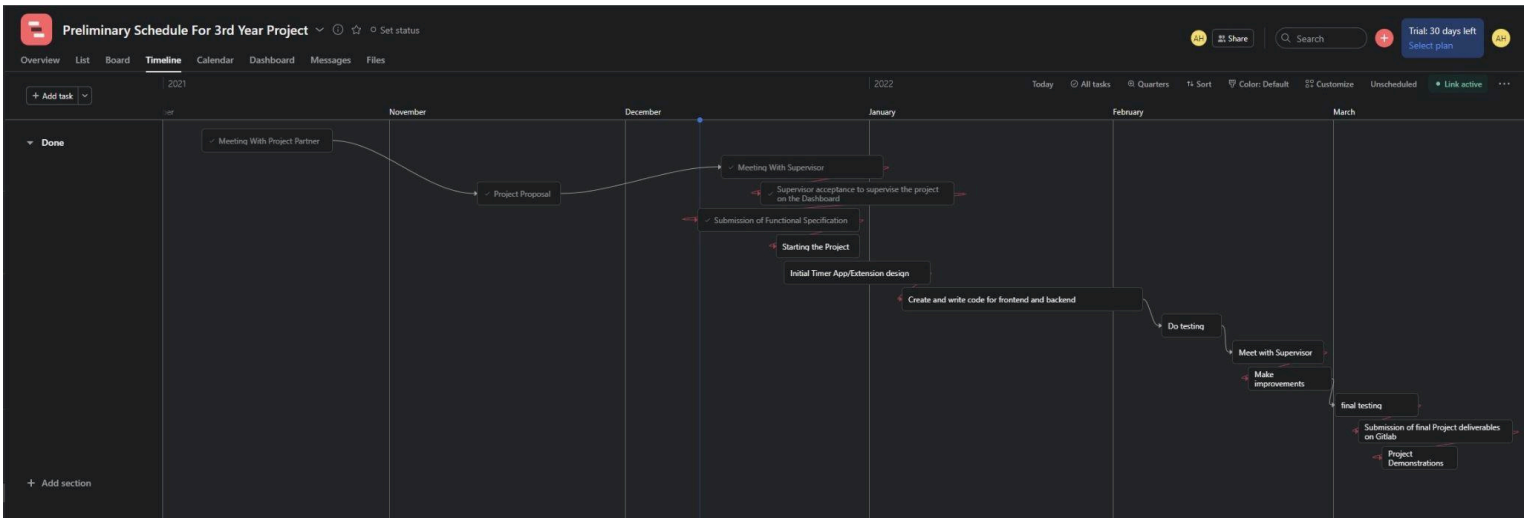
6. Preliminary Schedule

A Gantt chart maker was used to produce the time schedule below. It lists all of our completed activities (tasks and events) as well as upcoming projects.



Task name	Due date	Priority
Done		
Project Demonstrations	Mar 7, 2022 – Mar 16, 2022	
Submission of final Project deliverables on Gitlab	Mar 4, 2022	
final testing	Mar 1, 2022 – Mar 3, 2022	
Make improvements	Feb 18, 2022 – Feb 28, 2022	
Meet with Supervisor	Feb 16, 2022	
Do testing	Feb 7, 2022 – Feb 14, 2022	
Create and write code for frontend and backend	Jan 5, 2022 – Feb 4, 2022	
Initial Timer App/Extension design	Dec 21 – 29	
Starting the Project	Dec 20	
Submission of Functional Specification	Today	
Supervisor acceptance to supervise the project on the Dashboa	Dec 18 – 22	
Project Proposal	Nov 12	
Meeting With Supervisor	Dec 13 – 15	
Meeting With Project Partner	Oct 8	
Add task...		

The Gantt chart below shows a list of tasks with a suitable time scale along the top. A bar is used to symbolize each action. The start, duration, and termination dates of each activity are represented by the location and length of this bar.



7. Appendices

Node.js - nodejs.org

link to Gantt Chart: https://share.asana.com?key=921daa3cb7fe5a423a7f7b0f5bc54fef&domain=8572154648019&view=timeline

pycharm: https://www.jetbrains.com/

python: https://www.python.org/

Social Media And Mental Health:

https://www.addictioncenter.com/drugs/social-media-addiction/#:~:text=Excessive%20social%20media%20use%20can,such%20as%20anxiety%20and%20depression.