



Team 5
*Panda
Coding
Express*



Statement of Purpose

Problem: Programmers may *struggle to manage time, stay organized, and maintain focus for extended periods of time*, and those who use productivity tools like pomodoro timers or habit trackers have to juggle multiple applications with different UIs.

Solution: Our website provides a holistic solution to these problems by giving users a *suite of productivity tools* all in one website, so users have everything they need in one place.

Motivation: This product helps *facilitate productivity, organization, and overall wellness* for users via various features.

Goals:

- UI should be intuitive for programmers who may use *keyboards exclusively*.
- Integrate all features into one website with *fast access*, so that users don't need to switch between multiple different apps or tools.
- Provide a comprehensive suite of *productivity tools*, so that users can maximize their productivity and save time.

Statement of Purpose (Cont.)

Who:

This product is made for *programmers with their needs in mind*, but the website should be accessible and helpful to non-programmers as well.

What:

The product is a *journal* with a pomodoro timer, a habit tracker, a calendar, a markdown note editor, and a sentiment widget that tracks a user's feelings over time.

Where:

Our application will be *local first*, so it will work both offline and online.





USER PERSONAS

We developed 11 user personas during our brainstorming, but decided to dig deeper into 3 of them to cater to their needs better.

User Persona #1: Ben Log

Background: Ben Log is a tech blogger, and ex-software engineer at Meta, who has a passion for writing. He is proficient in multiple languages and aims to help upcoming and long-time developers/engineers navigate the industry during changing times.

Goals: He wants to stay up-to-date with the latest trends and developments in technology and showcase his writing skills.

Pain Points: Websites with too many features he will never use. Non-credible sources for news. Not being able to integrate his programming knowledge with his writing knowledge.

User Persona #2: Sarah Matthews

Background: Sarah is a Senior Software Engineer at Citigroup Bank with over 15+ years of experience in web development.

Goals: She is looking for a note-taking app that: 1. has markdown embedded for her meeting notes, 2. provides a minimalist/clean user design, 3. has a coding environment embedded. 4. Has a timer. Overall, she wants to have a journal that keeps her ideas, reflections, and meeting notes organized.

Pain Points: Cluttered UI, Lack of organization

User Persona #3: Ethan Clam

Background: Ethan Coding Bootcamp Graduate. He is currently looking for a job. He enjoys playing videogames and watching movies. He is bad at managing time, and bad at finishing projects.

Goals: Get a job by practicing for interviews. Keep up with work better.

Pain points: Complexity, poor performance/loading times and lack of accessibility

User Persona #4: Tim

Background: Tim is a manager currently busy with a project that requires keeping a large team on track to meet a looming deadline. Tim is dealing with a disjoint team that he's having to repair with a new strategy for efficiency.

Goals: In an app for keep track of things, Tim hopes to find something that he can track his overarching project with and create subtasks with deadlines to maintain efficiency. He also hopes that he can assign tasks to his employees and they all can collaborate together within the app.

Pain Points: He is looking for an app to get his team back on track and wants it to be minimal but effective. Distraction features could be detrimental and waste time.

User Persona #5: Sonia Kaur

Background: Sonia is a sound engineer and has worked on various projects, including studio recordings, live performances, and sound design for film and television. Sonia is passionate about audio technology and constantly seeks innovative solutions to enhance her workflow.

Goals: She wants a website that saves her audio recordings and takes audio input in order to navigate the website.

Pain Points: Websites with no audio accessibility.

User Persona #4: Jack

Background: Jack is a tech enthusiast and likes to code as a hobby after work. He is self-taught and works alone on his projects. Uploads videos going through his learning process and what he creates. Likes to see what other people have accomplished or done.

Goals: In a journal app, he would like to track his progress day to day, show other people/audience journal entries and process, and improve his skill as a developer.

Pain Points: Likes to work at night and uses dark mode only, likes an application that easy to use and understand, and dislikes clutter which isn't used in his workflow.

User Persona #6: Alex Chen

Background: Alex is a 24-year-old junior Software Engineer. He is a Bachelor's degree Computer Science. He has been a software engineer for the past 2 years. He is busy with work and has many deadlines to deal with. He frequently works with people in different time zones. He wants to better organize his work.

Goals and Challenges: Mastering a highly work-life balance and manage stress. It's hard for him to organize his thoughts because he always has a lot going on. He also wants to be more mindful and grateful for his current situation.

Interests: new software tools, self-help books, hiking and camping, spending time outdoors.

Tech Savvy: In very familiar and proficient with various digital tools and platforms. He also knows about various other journaling apps.

Needs: tags, categorization, and reminders. Integration with his other calendar and task managers, so that he doesn't have to transfer tasks. Prompts to guide self-reflection. Privacy and security.

User Persona #5: Bob

Background: Bob is a retired software engineer who now contributes to open-source projects that seem interesting. Been in the industry for a long time and is currently using markdown documents for this purpose.

Goals: Wants to show images of new implementations. Be able to share these journals to aid other open-source developers.

Pain Points: Annoyed with clunky software and wants something that stands out from other possible competitors (GitHub). Would like to be able to work offline.

User Persona #7: Bill

Background: Bill is a university student majoring in Computer Science seeking an internship. Bill struggles to keep up with busy schedule of classes and assignments. is not as consistent as he wishes to be with Leetcode, and is not very tech-savvy when it comes to new software.

Goals: A piece of software that can be used to track tasks, add class schedule into a calendar, and has a dark mode. Something that looks familiar and is easy to switch to for daily use.

Pain Points: He does not want software this is slow and clunky with a poor UI.

User Persona #8: Rohan Patel

Background: Rohan is a Master's student who is currently conducting research neural networks, and how they learn.

Goals: Rohan wants to prepare for weekly meetings with the lab staff, have a space to keep his work organized, and he wants to be able to track detailed progress for his presentations, and he wants to have information about when his fellow researchers are available to meet.

Pain points: something without a visual component, something without meeting notes embedded, something without a timer the needs to time himself for presentations, something that doesn't show everyone's schedule, conflicts/availability.

User Persona #8: Alicia Paine

Background: Alicia is a fourth-year computer science student who is going to mentor incoming second years over the summer. She wants to teach them about how to develop software using the whole Agile Process.

Goals: Alicia is looking for an app that allows the students she's mentoring to sketch out their ideas/development process as well as something with markdown embedded, so they can take meeting notes.

Pain Points: something without a diagram-making component, she needs a way for her students to map out ideas visually.



Alex Chen



Background: 24 year old Junior *Software Engineer*; Bachelor's degree in Computer Science. He has been a software engineer for the past 2 years, busy with *work and has many deadlines* to deal with. Frequently *works with people in different time zones* and seeks to better optimize his time. Wants to *maintain a healthy work-life balance and manage stress*, as it's usually hard for him to organize his thoughts because he always has a lot going on.

Needs:

Tags, Categories, and Reminders for better organization. Would like something to track his mood across days. He seeks to be more mindful and grateful.

Pain Points:

Does not *integrate task management with self reflection*.

No Privacy and security.





Bill Gonzalez



Background:

Bill is a **university student majoring in Computer Science** seeking an internship. Bill struggles to keep up with **busy schedule of classes and assignments**, is not as consistent as he wishes to be with coding, and is not very tech-savvy when it comes to new software. Wants to start tracking his work to see improvement over time.

Needs:

A piece of **software that can be used to track tasks, add class schedule** into a calendar. Something that looks familiar and is easy to switch to for daily use.

Pain Points:

He does not want software that is **slow and clunky with a poor UI**. Also doesn't like when using software is **time intensive or has a learning curve**.





Sonia Kaur



Background:

Sonia is a **sound engineer** and has worked on various projects with software developers. She **works at Spotify**. Sonia is passionate about audio technology and constantly **seeks innovative solutions to enhance her workflow**.

Needs:

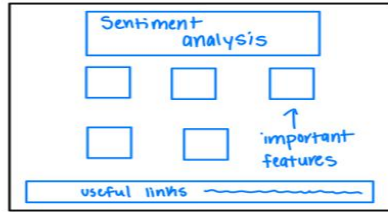
She wants a **website that saves her audio recordings** and takes audio input in order to navigate the website. She also wants to track her mood during various days of the week and wants a **minimalist design** and wants to use a **markdown style** of taking notes.

Pain Points:

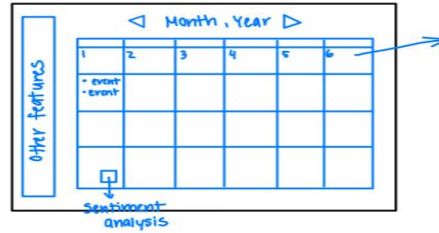
Difficult to use website, bad UI. **Does not have markdown as an option** in regular note taking app.



Home page



Calendar

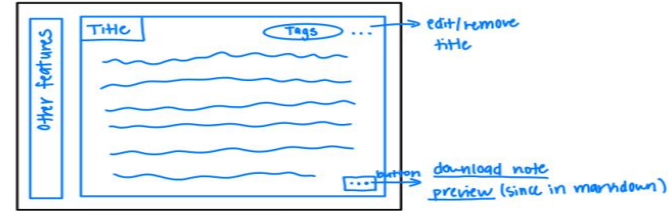
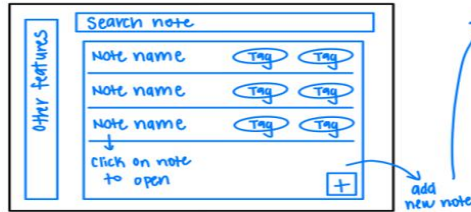


Task-list

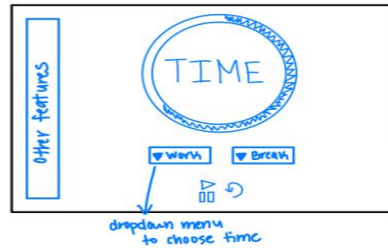


Wireframe

Notes



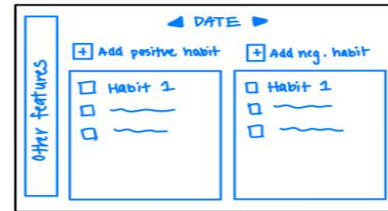
Pomodoro timer



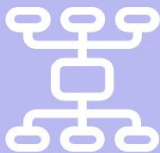
Analytics



Habit tracker



* Keep track of points
- lose points for neg. habits
- earn points for pos. habits



Wireframe & Must Haves

- Homepage

- Dashboard for all other pages with *icons to get to each widget*
- *Sentiment analysis* will pop up each day with a custom greeting so that users can rate how they feel everyday
- *Useful links* to learn more about the team will be on this page
- All the other pages (excluding the homepage) will have a *sidebar* to navigate the application

- Calendar

- Users can *add important tasks/events* to their calendar by clicking on the day
 - Brief *overview of events* for each day can be viewed from the main page
 - *Sentiment analysis* emoji will be displayed in the bottom right corner
 - Ability to *navigate* through months and years.

- Notes

- Users have the ability to *search notes* for keywords and *create* new ones
- Users can *add tags* to notes when creating them, with color coding functionality
- After opening up a note, users can *download* the note as a PDF in the bottom right corner
- The user also has the option to preview the *Markdown note* in final form using the button in the bottom right.





Wireframe & Must Haves (cont.)

- **Timer**

- Users can customize a *pomodoro timer* based on length of working and resting periods
- A functional *pause and play button* will allow the user to restart the timer
- The timer will visually have a *running clock* as well as a circle depleting to emphasize the time passing

- **Habit Tracker**

- Users can *add positive or negative habits* that they want to keep track of
- Completing positive habits will *reward them points* and the latter will remove points
- The habits can be created with custom user input and will *notify* the users on a regular basis

- **Analytics**

- Will provide a visual on the user's *sentiment analysis in the form of a graph* that covers an extended time period
- Has *shop to buy icons* (or achievements/medals) with points earned from the habit tracker and daily login tracked by sentiment analysis





Nice to have

In-built Code Editor:

While this is an interesting feature, *developers typically have their preferred code editors*. Further, the focus of a journal is not programming - it is jotting down ideas, reflecting on the past, and planning out future events.

Audio Integration (Voice Memos) :

Despite being a useful feature to record activity, *many developer prefer to type as opposed to record audio*. Further, keyword search would require transcription, implementing which would *add to complexity*.

Integration with Google Calendar :

As many developers likely use a calendar to *track their schedule and events*, integration with Google Calendar would be a great feature. However, considering that *time constraints and level of quality* we are planning on achieving, adding a feature like this is not an absolute necessity to the vision of our application.



No Go's

Leetcode Problem Tracker:

While Leetcode is a staple for sharpening programming skills, Leetcode already has a built-in problem tracker. Thus, a Leetcode Problem Tracker on our website **would be redundant and overlooked** by users.

Pre-made Templates:

We wanted this web development journal to be more customizable for the user since it is a personal journal, and this is why we won't be including pre-made templates in case it **may hinder creativity**.

Document Signing:

Document signing is something that would be unique, but didn't seem like a necessity for the user personas we were targeting. Most **users of our journal won't need this functionality** so it wouldn't be used.





Developer Specific Features

Markdown:

Since *markdown is ubiquitous in the programming world*, a markdown editor is essential for a developer journal.

Keyboard Shortcuts

Productivity is essential for most developers. Not using the mouse and being able to navigate between different features on the website using specific *keyboard shortcuts saves time*.

Minimalistic and Intuitive Design

As developers *prioritize efficiency* when it comes to interacting with applications, ensuring that our design follows a *minimalist approach* and is easy to navigate without diving deep into documentation is crucial. This is important because the user experience is of utmost priority when it comes to developing something as specific as a dev journal.





Appetite

- Within our **5 week timeframe**, we want to complete **at most 5 features** in our developer journal
- Depending on the complexity of the task, we will allot around **1-2 weeks for each feature**. We will try to split our team and work on **3 features in parallel** at any moment since they are largely independent of one another.
 - For each feature, we would come up with basic **designs**, work on the **implementation**, and then focus on unit **testing**.
 - We will try to finish the development of standalone features between weeks 6-8.
 - In week 9, we would then work on making the **dashboard** and applying finishing touches to the website.
- Given the importance of having a **proper CI/CD pipeline**, each week we would have a couple of people solely focusing on the same while the others trying to incorporate relevant principles into features they are building





Risks

Compromising on the Quality :

Since we have only 5-6 weeks to develop this, we might plan **too many features** for the time we have and ultimately compromise on the quality.

A lack of time and too many features could lead to **poorly documented, unmaintainable code**. It's important to uphold quality by managing the scope of our project.

Experience:

All of us have different levels of experience with Web Development, this might lead to **communication gaps**. However, effective delegation of tasks can help us overcome this.





Rabbit Holes

Notes:

This is a pivotal feature in our application, and we have decided to incorporate **multiple sub-features** within this primary functionality. However, increasing the complexity of this feature carries the risk of leading us down a rabbit hole of endless possibilities.

Habit tracker:

We don't want to overwhelm ourselves by adding **too many features** to this habit tracking widget. It's easy to get carried away envisioning all the possibilities, like different types of rewards, gamification elements, and so on. However, we should be careful not to spend too much time getting lost in developing an elaborate reward system instead of focusing on the core functionality of the application.