

# CSE 110 Project Pitch

## Statement of Purpose

Our software engineering project aims to create a dynamic Developer Journal, catering to the multifaceted requirements of modern developers. The app will serve as a comprehensive platform to track coding activities, project progress, and personal growth in a developer's daily routine. It aims to integrate various aspects of a developer's workflow, including to-do lists, calendars, documentation, and personal reflections, into a single, seamless interface. This statement outlines the key features and objectives of our project.

## TO-DO List

The TO-DO list feature of our Developer Journal will facilitate organized task management. Tasks will be structured into "Need to be Done," "Doing," and "Done" columns for clear visualization of progress. Users can assign tags for categorization, enhancing task clarity and organization. Integration of due dates will ensure timely task completion. Upon task completion, users will receive animated feedback, enhancing the user experience. Individual and total completion bars will provide a comprehensive overview of project progress. Subtasks can be added for intricate task management, and progress can be monitored with goal setting and tracking functionalities.

## Journal

The Journal feature of our Developer Journal is designed to provide a secure and versatile space for documentation and reflection. Users can opt for PIN access to safeguard sensitive content. It will include a wiki for documentation, featuring favorite libraries, code snippets, and project ideas. A dedicated space will be allocated for recording decisions and reflections on project development. Also, we will integrate feedback forms to allow user input and improvement.

## Calendar

The Calendar module offers comprehensive scheduling, enhancing project organization and planning. Users can manage events such as birthdays, holidays, and deadlines from the TO-DO list. Display preferences can be customized for a personalized viewing experience, and interactive elements will enhance user engagement and usability.

## Dashboard Page

The Dashboard serves as the central hub for project management, offering an overview of tasks, documentation, and scheduling. It will consolidate TO-DO list, Journal, and Calendar modules for centralized access. A graphical representation of mood trends over time, with mood-specific music integration, will be provided. Daily goals will be persistently displayed for enhanced productivity and motivation.

In conclusion, our Developer Journal project endeavors to empower developers with a comprehensive and intuitive toolset for efficient project management and personal productivity. With a focus on functionality, accessibility, and innovation, we aim to redefine the standard for developer-centric project management solutions.

## Proposed Technologies:

- **Database:** PostgreSQL for robust data management.
- **Back-End Framework:** Node.js, potentially using Express for handling server-side logic.
- **Front-End Technologies:** HTML, CSS, and JavaScript to create a responsive and dynamic user interface.
- **APIs:** Integration with GitHub for tracking project changes, Google Calendar for managing deadlines and events, and potentially other APIs for mood music recommendations.

## Topics of Risks

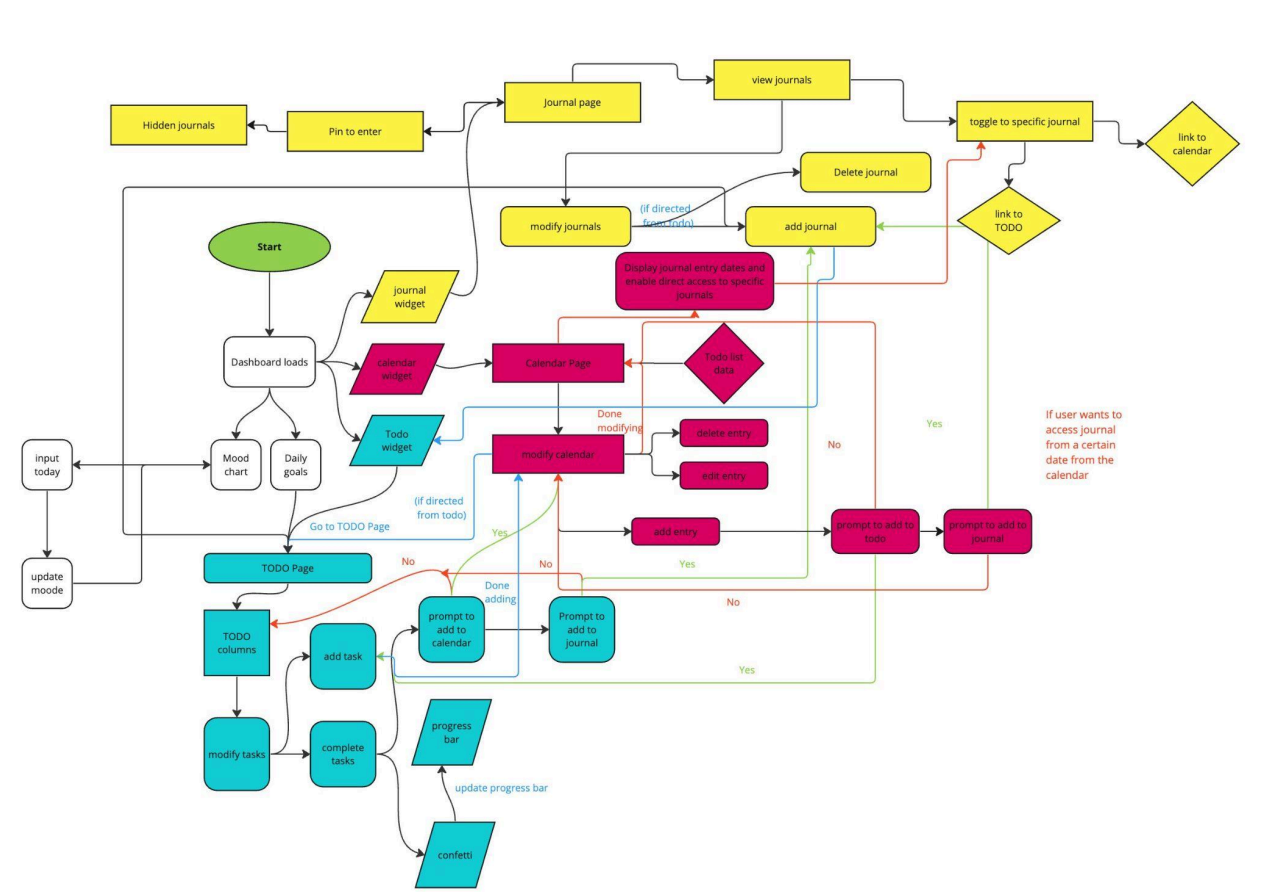
- **Data Security and Privacy Risks:**

- Unauthorized access to sensitive personal data due to weak security mechanisms, such as insufficiently secure PIN handling or data encryption.
- Risks of data leaks or breaches, particularly if data is stored in the cloud without adequate security measures.
- **User Data Management:**
  - Challenges in handling the deletion and modification of user data, potentially leading to data integrity issues or non-compliance with data protection regulations like GDPR.
  - Risks associated with data synchronization across multiple devices, leading to potential data loss or corruption.
- **Performance and Scalability:**
  - Slow app performance due to heavy data loads, especially with the integration of features like fitness tracking and mood tracking graphs.
  - Scalability issues as the number of users grows, which could affect the responsiveness and stability of the app.
- **Integration Risks:**
  - Dependencies on third-party services for features like holiday imports and music for mood tracking, which could lead to disruptions if these services experience downtime or changes in their APIs.
  - Difficulties in integrating various features seamlessly, such as syncing calendar events with todos and tracking deadlines effectively.
- **User Engagement and Retention:**
  - Risk of low user engagement if the app's interface is not user-friendly or if the features do not meet user needs effectively.

- Challenges in maintaining user interest over time, especially if the app's features become monotonous or fail to add value.
- **Compliance and Legal Risks:**
  - Potential non-compliance with legal standards related to health data if the fitness tracker collects sensitive information.
  - Risks related to copyright and intellectual property, especially with user-generated content in the wiki and references sections.
- **Technical Debt and Maintenance:**
  - Accumulation of technical debt due to rapid development cycles without adequate refactoring or testing.
  - Maintenance challenges as the app evolves, particularly if it incorporates a wide range of features that require regular updates and bug fixes.
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## Rabbit holes

- Potentially focusing on implementing extra functions instead of core functionality
- Spending too much time trying to incorporate outside resources like APIs
- Focusing on adding too many features rather than user accessibility
- Connecting too many things to each other might get confusing for user and make it complex to implement
- Getting distracted with using AI and end up spending more time in debugging rather than learning
- Increasing complexity without testing the basic features thoroughly



## User stories

- As a user, I want the journal to be accessible through different devices
- As an aspiring software developer, I want my developer journal to be intuitive and easily accessible, while still containing enough features for me to adequately track my process.
- As a developer, I want to log daily activities and issues, so I can reflect on and improve my coding practices.
- As a worker who is concerned over their performance, I want to be able to see my productivity over time.
- As a team leader, I want to view project progress across multiple team members, so I can manage timelines and distribute resources efficiently.

- As a learner, I want to track my educational milestones and resources, so I can see my growth over time
- As someone very emotional, I want the ability to keep track of my moods to ensure that I match my daily capacities to the work I complete.
- As a developer working on different teams I would like the ability to have team members and managers leave comments and feedback on my development journal entries.
- As a student, I want to keep track of assignments and due dates
- As a user, I want to categorize my journal entries by tags (like 'work', 'personal', 'learning'), so I can filter and search entries based on these categories.
- As a developer, I want to attach files or links to my journal entries, so I can keep all relevant materials together and easily accessible.
- As a user, I want to be able to customize my own experience of using my journal entries by changing its appearance and/or possibly the way it looks in viewing my entries
- As a project manager, I want to see a dashboard view of all current projects and their progress, so I can quickly get an overview without opening each project individually.
- As a user, I want to set up recurring tasks or goals that remind me daily/weekly/monthly, so I can maintain consistency in my habits and project deliverables.
- As a user, I want to track the time spent on various tasks, so I can analyze my productivity and plan better.
- As someone with memory loss, I want to remember the things I need to do, using a to-do list integrated with a progress bar.
- As a developer, I want to automatically import my code commits as journal entries, so I can have an automatic log of my coding activities.
- As a manager, I want to add and manage team members within the app, so I can assign tasks and monitor individual contributions directly from the journal.

- As a student who makes a million mistakes I would like to be able to track my (horrible) code progress