**JHET Innovations**

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To:

Jeffrey Tirschman

[jtirschman@towson.edu](mailto:jtirschman@towson.edu)

Subject: Scope and Vision Project Proposal - *Studious*

Dear Professor Tirschman,

On behalf of JHET Innovations, it is with great pleasure that we submit our proposal for Studious, a web application designed to elevate students' studying habits to a new level. Studious will empower students by transforming how they collaborate, organize, and succeed academically.

Studious provides the digital tools necessary for students to create and manage study groups, organize virtual study sessions, set reminders for exams and assignments, and share notes with others effectively. Studious will allow every student to study according to their own pace and style. The app will include a Pomodoro timer and group studying activities like flashcards and quizzes.

JHET Innovations’ top priority is building a platform that is not only functional but accessible and engaging to students of all ages and academic levels. We believe Studious can encourage collaborative learning and become a platform where confused individuals can come together to help themselves and each other academically.

We look forward to discussing this project further and answering any questions. Thank you for considering our proposal and supporting our mission.

Sincerely,

JHET Innovations

The Opportunity

Humanitarian Approach

Studious is a humanitarian-driven project aiming to encourage collaboration between students. Students will be encouraged to share notes, join virtual study groups, ask more questions, and bond effectively over app features.

Business Need

The overall purpose of this app is to provide accessible, collaborative, and motivational tools necessary for academic success. Studious will help students keep pace with their assignments, find reliable study partners, and relieve stress with game-based productivity tools.

Revenue Potential

This app will receive its profits through freemium subscriptions, with hopes of moving towards institutional licensing for schools and universities, and targeted partnerships with educational brands or tutoring services.

Market Approach

*Studious’* market approach emphasizes accessibility and differentiation. As a low-cost provider, JHET Innovations aims to make *Studious* affordable for all students while offering a user experience that matches their specific needs. Through specialization, we differentiate by focusing on collaborative learning rather than just task management. To conclude, by introducing new capabilities such as interactive studying tools and a Pomodoro timer, *Studious* brings fresh motivational elements not widely offered in existing apps.

Our Vision Statement

“*To empower students everywhere to achieve their fullest academic goals by creating a collaborative, motivating, and accessible platform that transforms studying into a shared journey of success.*

Major Features / Functionality Description

Studious aims to enhance student learning and collaboration through the following core features:

1. Study Circles

* Users can create and join study groups to collaborate with peers
* Group chats that support text, image, and file sharing
* A search function allows users to find Study Circles based on school, grade level, or course

1. Direct Messaging

* Enables users to communicate privately with peers in addition to study groups

1. User Profiles

* Profile creation and customization with photos, descriptions, school information, grade level, and currently enrolled classes
* Friend request feature to foster strong peer connections
* Status indicators (online, studying, away, offline)
* Secure authentication to ensure persistence

1. Note sharing and requesting

* Shared resources folder within study circles
* Notes can be made visible on profile which can then be requested by other users

1. Calendar and Assignment Tracking

* Create listings for assignments/tasks with descriptions and due dates
* Assignments/tasks are automatically placed into an interactive calendar

1. Pomodoro Timer

* Built in timer that splits time into specific focused intervals for increased productivity
* Can be used individually or synced across a study circle for group productivity

1. Interactive Study Tools

* Create flashcards, quizzes, and live polls
* Can be used individually or within a study circle

Scope of Initial Release

Our initial release of Studious aims to deliver a functional and cohesive application that implements all the major features listed above. For the initial release we will prioritize functionality, ease of use, reliability, and availability. As listed above this release will include:

* **Study Circles**: Group chat functionality with file sharing
* **Direct Messaging**: Private messaging between users
* **User Profiles**: Customizable accounts with social networking features
* **Note Sharing and Requesting**: Group and direct file sharing
* **Calendar**: Interactive calendar with assignment tracking
* **Pomodoro Timer**: Individual or group productivity timer
* **Interactive Study Tools**: Flashcards, quizzes, and polls for individual and group usage

The platform will be deployed as a web application with an intuitive and modern user interface. Storage will initially be handled locally but our system architecture will be designed with scalability in mind. Overall, our initial release will be a production ready platform that users can rely on for collaboration and learning

Scope of Potential Future Releases

As our platform continues to grow, Studious will focus on expanding functionality with new features with hopes to improve collaboration and integrate with classroom technology already in use. Some potential features we have considered are:

* **API Support for Classroom Technologies**: Connect with platforms such as Blackboard, Canvas, and Google Classroom to automatically import classes, assignments, and rosters. Artificial intelligence could potentially be leveraged to read syllabuses or timelines for important dates and give smart reminders on upcoming tests or projects.
* **Enhanced Study Circles**: Expand on the idea of study circles by adding support for voice/video calling, screensharing, and digital whiteboards. These enhancements will apply to both private and group interactions

Planned Technologies

Studiouswill be developed using cutting edge modern technology, ensuring accessibility and ease of use.

* **Frontend**: The user-facing web application will be built using React and styled using Tailwind CSS. React will be used to manage dynamic content and interactivity while Tailwind CSS will be used to create a visually appealing user interface.
* **Backend**: Node.js will be implemented on the main server to facilitate communication between the frontend and storage databases, with JSON Web Tokens (JWT) being used for user authentication. Socket.io will be implemented on top of Node.js to support collaboration features like real time communication between users and in Study Circles
* **Database**: PostgreSQL will be our primary database for storing structured data such as user accounts, profiles, Study Circles, assignments, and other important data.
* Deployment: The front end will be deployed using Vercel, while the back end will be hosted on Render to ensure scalability while also minimizing costs. As for storage we plan on initially hosting our PostgreSQL database directly on the backend will the possibility of expanding outwards towards cloud computing in the future.

Operating Environment

* Studious will operate in a web application environment, ensuring users have access across modern browsers on their personal devices (laptops, desktops, tablets).
* Core features will be optimized to ensure they are accessible across different sized devices and different browsers

Assumptions and Dependencies

* Engagement with users (students) will engage in study sessions, note sharing, quizzes, and productivity tools such as Pomodoro timers.
* Users will have reliable access to the web application to use its features. *Studious* will maintain its front and back-end performances.
* User data (such as passwords) will be protected.

Competitive Analysis

Potential Competitors

There already exist several apps with similar functionality as ours such as:

* Discord- A widespread communication app used for building communities and groups. It can be used to create study groups, voice/video calls, and file sharing.
* Slack- A cloud-based communication and collaboration platform for teams, often repurposed by students for collaboration and project tracking, but not much for studying.
* GroupMe/WhatsApp/Messenger- Lightweight messaging apps with group features, although lacking any academic focus.
* Quizlet- An academic app focused studying through the use of flashcards and quiz-style games, though there is no real community or group interaction between users.

Their Success

Discord boasts millions of different servers for all kinds of communities. Among college students, plenty of those servers serve to be used as informal study circles. Slack serves both a professional and academic audience, making it great for project and group work, especially with active tracking for all members. Apps like GroupMe and WhatsApp are perfect for quicker, small-scale communication, though they lack any kind of academic or study focus. As for Quizlet, it is quite well known, with millions of users, showing that there is a demand for a study-oriented platform. Each app has their own individual successes, but they aren’t anything that completely incorporates all the features we plan to provide.

How is Our App different?

What sets our app apart from the others is the inclusiveness of all their best assets. Unlike our biggest competitors, Discord or Slack, Studious is designed and centered around school and class context, making it easy for users to search for peers that can assist their academic needs. We combine messaging, note/resource sharing, calendars, and assignment checklists into one hub—no need to juggle multiple apps. Finally, our study circle suggester will help to foster organic connections beyond a user's potentially already existing friend group.

Our Target Audience

The primary target audience are college and university students, who want an academic-centric platform for building study groups, and sharing information. Secondarily, any school student can really benefit from this, as they aim to be potential professional learners. With roughly 18 million active college students in the United States alone we have a very plentiful market size. On top of that there are millions of university students globally, and we have a lot of people that can truly benefit from our app’s services. With education becoming more hybrid and online, a tool that provides both group collaboration and study management are in high demand.

Contribution Summary

Hudson Cho

* Completed
  + Major Features
  + Scope of Initial Release
  + Scope of Potential Future Releases
* Reviewed and refined all sections for grammar, clarity, technical accuracy, and consistency
* Assembled and formatted final document
* Revised Technology Used section (~45%)

Tehrence Jackson

* Completed
  + Potential Competitors
  + Their Successes
  + How is Our App Different
  + Our Target Audience
* Research into competitors

Edward Deensi

* Provided cover page
* Completed
  + Humanitarian Approach
  + Business Need
  + Revenue Potential
  + Our Vision Statement

Jaden Kearney

* Completed
  + Planned Technologies
  + Operating Environment
  + Assumptions and Dependencies