Technical Scope Document

for

New System

Version 1.0 - draft

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# Business Requirements & Technical Scope

<The business requirements provide the foundation and reference for all detailed requirements development. You may gather business requirements from the customer or development organization’s senior management, an executive sponsor, a project visionary, the marketing department, or other individuals who have a clear sense of why the project is being undertaken and the ultimate value it will provide, both to the business and to customers.>

## Background

As we progress through our college years, we have noticed a lack of collaborative tools that are specifically designed for students. Although applications like Discord and GroupMe can provide group chats for students, they are primarily social platforms that lack the ability to integrate directly into a student’s life. This often results in students having to bounce between multiple disconnected applications to manage assignment tracking, group chats, and study sessions. It is for this reason that JHET Innovations have decided to develop Studious, the next generation of collaborative studying. Studious will allow students to connect with their peers by searching for chat rooms tied to specific schools, classes, or clubs. Furthermore, we will offer virtual studying sessions, file sharing, direct messaging, and an assignment tracker, all aimed at encouraging effective and healthy studying habits for students.

<This section summarizes the rationale for the new product. Provide a general description of the history or situation that leads to the recognition that this product should be built.>

## Technical Objectives

The goal of Studious is to create an accessible and collaborative environment that encourages students to chat with their peers and discuss blah blah blah. In order to achieve this we plan to utilize industry standard tools and platforms to deploy and host our application. Below are technical objectives that defined the specific targets for development, deployment, and useability.

**Front-End Development**

* Utilize React to provide and interactive environment
* Utilize Tailwind CSS to create a visually appealing product

**Back-End Development**

* Utilize Node.js for supporting key core features (connecting front and back end)
* Utilize Socket.io for real time web communications both for group and direct messaging

**Data Storage**

* Utilize PostgreSQL to create a database used for storing files, images, user data, etc.
* Initially storage will be hosted locally
* Follow best practices to ensure we create a scalable product that can be easily transferred to the cloud or expanded locally with ease

**Target Operating Systems**

* Full support for desktop operating systems: Windows, MacOS, Linux
* Planned support for mobile operating systems
  + Android 16
  + IOS 26.0.1

**Target Browsers**

* Full support for the most popular web browsers on desktop machines
  + Chrome 143.0
  + Firefox 143.0
  + Safari 5.1.7
* Planned support for mobile browsers

**Deployment**

* Front end deployed through free tier of Vercel
* Back end deployed through free tier or Render
* Storage/database hosted locally

**Source Code Repository**

* Official source code stored in a private GitHub repository

**User Interactions**

* Easy to interact with user interface
* Minimal lagging
* Seamless user experience

**Security Goals**

* Follow best practices to ensure data is safely protected
* Create our product with a “security first” mindset
* Planned end-to-end encryption

## Customer Requirements

<Describe the needs of typical customers, including needs that are not yet met by the marketplace or by existing systems. You may wish to describe problems customers currently encounter that the new product will (or will not) address and how the product would be used by customers. Identify the customer hardware and software environment in which the product must operate. Define at a high level any known critical interface or performance requirements. Avoid including any design or implementation details. Present the requirements in a numbered list so that more detailed user or functional requirements can be traced to them.>

# Scope and Limitations

<The project scope defines the concept and range of the proposed solution. It’s also important to define what will not be included in the product. Clarifying the scope and limitations helps to establish realistic expectations of the many stakeholders. It also provides a reference frame against which proposed features and requirements changes can be evaluated. Proposed requirements that are out of scope for the envisioned product must be rejected, unless they are so beneficial that the scope should be enlarged to accommodate them (with accompanying changes in budget, schedule, and/or resources).>

## Scope

<Describe the intended major features that will be included in the initial release of the product. Consider the benefits the product is intended to bring to the various customer communities, and generally describe the product features and quality characteristics that will enable it to provide those benefits. Avoid the temptation to include every possible feature that any potential customer category might conceivably want some day. Focus on those features and product characteristics that will provide the most value, at the most acceptable development cost, to the broadest community.>

## Limitations and Exclusions

<Identify any product features or characteristics that a stakeholder might anticipate, but which are not planned to be included in the new product.>