Study Buddy - Feasibility Study

Technical/Implementation considerations

1. Technical feasibility:

The project will have three main technical components, the front-end, the back-end, and UI/UX design. These are the team's self-rated proficiency on each component.

1. Front-end (HTML, CSS, Javascript):
1 member has advanced experience, 1 member has intermediate experience, and 2 members have basic experience.

2. Back-end (Javascript, NodeJS, MongoDB):
1 member has intermediate experience, 1 member have basic experience, and 2 members has no experience.

3. UI/UX Design (Figma):
2 members have intermediate experience and 2 members have basic experience.

4. Project size:
4 people will be working on this project for the span of 2 months.

5. Risk assessment:
Risk is medium due to different levels of familiarity of different team members and a tight schedule.

The tasks and technical components will be distributed such that the most-experienced member at each task will work on that. By distributing the tasks that way, we can minimize the friction and learning curve required for each task. There may be some technical obstacles that may come up later, but at the moment the team members are confident in the technical implementation of the project.

2. Operation feasibility:

Once the project is complete, the project will not require much hands-on operation other than maintenance and upgrades. The project will be automated, as the system will be able to register new users on its own, match Study Buddies on its own, and automatically close inactive rooms.

Care will be taken to ensure that the performance of the system will not degrade over time without requiring frequent restarts. The code and functionionality of the project will

not be too complex, thus it is unlikely for there to be any memory leaks, or extremely inefficient code.

The system will also be unlikely to crash because of the same reason, but there will be a system ready in place to handle any potential crashes. It will automatically restart the system upon a crash and log the error that caused it so that it can be fixed in the future, but will not require immediate attention by administrators if it crashes.

Economic feasibility:

1. Costs

There is no budget allocated to the building of this project, thus there is no financial cost to the team or stakeholders. There are no dependencies in the project that will require financing from the team (e.g paid APIs or licensing). Only free services are required for the construction of the project, such as Google Meet or Zoom, both of which are free services.

2. Benefits

a. Tangible

i. At the moment, there is no plan to monetize the project. It is developed as a project for social good in our university.

ii. Widespread use of the project can increase the grades of students in the school by a letter grade.

iii. Students can meet up to 4 new people in every Study Buddy session.

b. Intangible

i. The project will be able to help students in our university to make more friends, and a more cohesive community can be formed.

ii. The project has the potential to do a lot of social good, such as improving the mental health of students in quarantine who are having difficulty finding friends to study online with.

Schedule feasibility:

The project is expected to be completed in 2-3 months time by a team of 4 students. StudyBuddy is a small-medium scale project, with only 1 main feature (connecting students), though there are a lot of smaller features that will be required to support that feature such as OAUTH authentication, editing of Study Buddy preferences, a chatroom and Pomodoro Timer for each room. Testing will also be a time-consuming process, as we will need to test the functionality of the matching algorithm for a lot of different situations, such as matching in a time with low user density, high user density, users with different preferences etc.

With that all being said, the project is doable within 2-3 months. Barring any extenuating circumstances preventing any team members from working on the project, the project will likely be completed in time, with all the listed features and requirements. In the unlikely scenario that we are not able to deliver on all the features, certain non-essential features may be removed to make sure the project can be released on time. Development can continue after the release of the project.