# **Feasibility Study : Real time Chat Application**

1. Technical feasibility: A chat application can be technically feasible if the necessary technology, such as a server and instant messaging protocols, are available and can handle the expected number of users. The development team should have the necessary technical expertise to implement and maintain the chat application in our case ReactJS , NodeJS , MongoDB etc.
2. Economic feasibility: An analysis of the costs and potential revenue from the chat application would determine its economic feasibility. It should be determined if the revenue generated from the application will be sufficient to cover the costs of development and maintenance.
3. Operational feasibility: It is important to determine if the chat application can be integrated into the current operational processes and if the necessary resources, such as personnel and equipment, are available to implement and maintain the application.
4. Legal feasibility: It is important to ensure that the chat application complies with any relevant laws and regulations, such as data privacy laws.
5. Schedule feasibility:

* Month 1: Requirements gathering and analysis. This includes conducting user research, gathering requirements and creating a detailed project plan.
* Month 2 and 3: Design and development. This includes designing the user interface and database, and implementing the core functionality of the chat application.
* Month 4: Deployment Maintenance Testing and quality assurance. This includes deploying the chat application to the production environment, training users and providing ongoing maintenance and support and includes testing the application for bugs and user acceptance testing to ensure it meets the requirements and is user-friendly.

## **Introduction or Executive summary:**

Our project is a chat application that allows users to communicate with each other in real-time. The application is designed to be user-friendly and easy to navigate, with features such as group chats, direct messaging, and the ability to share files and images. The goal of the project is to provide a seamless and efficient way for people to connect and communicate with each other, whether it be for personal or professional use.

* Stakeholders: The end users of the chat application software will be individuals and businesses that need to communicate with each other in real-time. Other stakeholders include the development team, investors.
* Business Profile: Our organization is a software development company that specializes in creating custom application software for clients.
* Problems in the existing system: Many current chat applications have limitations in terms of security , and customization options.

## **Project Scope :**

* The chat application will allow users to communicate in real-time through direct messaging and group chats.
* Users will be able to create and join multiple group chats, with the ability to add and remove members.
* Users will be able to send and receive text, images, and files.
* The application will have a user-friendly interface that is easy to navigate.

## **Methodology and tools used for feasibility study:**

* **Brainstorming**: The development team will hold brainstorming sessions to generate ideas for the chat application and to identify potential features and functionalities.
* **SWOT analysis:** A SWOT analysis can be used to evaluate the strengths, weaknesses, opportunities, and threats of the chat application and identify any potential issues or challenges.
* **Interviews**: The development team will conduct interviews with potential users and stakeholders to gather feedback and gather information about their needs and requirements for the chat application.
* **Focus Groups**: The development team will hold focus group sessions to gather feedback on the chat application's design and functionality from a group of potential users.
* **Surveys**: The development team will conduct online surveys to gather information about the needs and preferences of potential users.

## **Observations or findings from the feasibility study:**

* High demand for a user-friendly chat application that can handle a large number of concurrent users and a high volume of messages without experiencing delays or crashes.
* A need for security features to protect user's data and prevent unauthorized access.
* User feedback indicating that the current chat application market is lacking in terms of user experience and flexibility in terms of group chat and file sharing capabilities.

## **Challenges and assumptions considered for the project study :**

### Challenges:

* Technical challenges: The chat application must be able to handle a large number of concurrent users and a high volume of messages without experiencing delays or crashes.
* Security challenges: The chat application must have security features to protect user's data and prevent unauthorized access.
* User experience challenges: The chat application must have a user-friendly interface that is easy to navigate and understand.

### 2.Assumptions:

* The development team will have the necessary skills and expertise to develop the chat application.
* The chat application will comply with all relevant laws and regulations.
* Sufficient funding and resources will be available to complete the project on time and within given budget.

## **Recommendations:**

* The proposed technology stack of Node.js, Socket.io, and React.js is appropriate for creating a real-time chat application and should be able to handle the expected number of users and chat rooms.
* The development and deployment of the application can be completed within a reasonable timeframe and budget.
* The application is expected to comply with any relevant laws and regulations related to data privacy and security.
* A detailed risk analysis should be carried out and mitigation plan should be in place.
* Also, implementation should be done in phases with regular monitoring and evaluations to make sure that the project stays on track and objectives are met.

## **Team name, Student names and Roll numbers:**

#### *Team Name:*

**Real-time Connect**

#### Team Members:

* **P Manindhra Goud - 21BCS077**
* **M K VIVEK - 21BCS059**
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## **Glossary / References :**

* “ How to Conduct a Feasibility Study ” -by Project Manager [ [Guide](https://www.projectmanager.com/training/how-to-conduct-a-feasibility-study)  [Youtube](https://www.youtube.com/watch?v=WI6_snOjlm0) ]