PES UNIVERSITY , BANGALORE

SOFTWARE ENGINEERING(UE21CS341A)

MINI PROJECT

REAL TIME CHAT APPLICATION

TEAM NUMBER: 14

TEAM MEMBERS:

L SAI TEJAS (PES2UG21CS250)

MEENAL BAGARE (PES2UG21CS289)

MEGHANA ANAND (PES2UG21CS291)

MELVIN JOJEE JOSEPH (PES2UG21CS294)

PROPOSED PROJECT DESCRIPTION(SYNOPSIS):

Chat applications have become more important in our daily lives in the current world scenario , given the fact it has made our lives easier by sending instant messages or media just in time without making much efforts. In this project, we have decided to make a simple real time chat application software, which would work in a similar way other chat applications work.

In this application we have decided to implement the following

functionalities:-

- **User registration:** users can sign up for creating a new account on the application .
- **Send messages:** user should be able to send instant messages and be notified when the message has been delivered.
- **Send attachments:** user can send attachments like files,photos,videos.
- **Broadcast message:** user can add multiple contacts into a group and broadcast messages to all the contacts in that group.

PLAN OF WORK AND PRODUCT OWNERSHIP:

1.**Backend development**

The tasks involve integrating Redis for chat data management, using RESTful API endpoints for user registration, login, and contact management and enforcing data validation.

2.**Websocket server management**

The responsibilities involve utilizing the WebSocket server for real-time messaging and integrating it with the Redis repository to facilitate message storage and retrieval in real-time.

3. **Frontend Development**

The tasks involve creating a user-friendly and responsive ReactJS application to implement screens for user registration, login, one-to-one chat, and contact management features.

4.**Project Management**

The responsibilities involve overseeing project coordination and comprehensive documentation, ensuring smooth progress and leading quality assurance activities, including integration and system testing.

PROJECT WORK DISTRIBUTION:

1. Melvin jojee joseph: front end development of the main page.
2. Meghana Anand : backend development alongside integration of database.
3. Meenal Bagare: integration of websocket with the database.
4. L Sai Tejas: creation of database for storing user credentials and chat data management.

QUALITATIVE ASPECT:

With this chat application we aim to provide :-

- A well-designed and intuitive user interface which enhances the user experience. The software should be easy to navigate, visually appealing, and responsive to user interactions.
- Users expect a chat application to be reliable and stable. It should work consistently without frequent crashes or downtime.
- The chat application should be fast and responsive. Messages should be delivered promptly, and the software should handle a reasonable number of users and messages without slowing down.
- Data security and privacy are critical. The software should use encryption to protect messages and user data. It should also have mechanisms to prevent unauthorized access.