Web Real Time Communication App
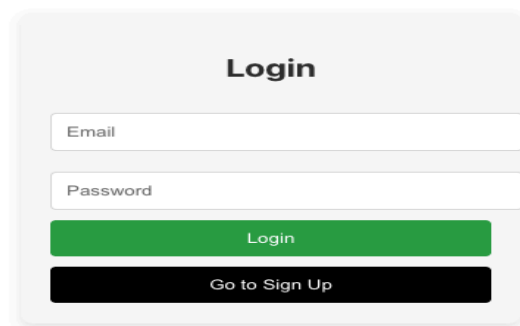
User manual

Overview: Welcome to our video conferencing application! Here, users can join virtual rooms to have real-time conversations with others. Once in the room, they can start talking and connect seamlessly. If needed, there's also a chat feature, allowing users to send messages during their time in the room. This app is designed to make remote communication easy, interactive, and effective.

Technology: This application is built with **Node.js** (version 18.17.0) for the backend, using the powerful **Express.js** framework. For the frontend, we use **React.js** to create a dynamic and responsive user interface. The application stores data in **MongoDB**, a flexible and scalable NoSQL database. For design and styling, **HTML** and **CSS** are used to create a clean, user-friendly experience.

Features: This application offers a seamless user experience with key features designed for easy communication. First, users need to sign up and log in to access the platform. Once logged in, they can create a new room or join an existing one to begin a conversation. By simply clicking on a room title, users can enter and start interacting with others. When other users join the room, the conversation can begin with options for video, audio, and chat. This allows for real-time communication, making it easy to connect with others through multiple forms of interaction.

Authentication: To get started, users need to register by providing their email and password. If any errors occur during registration, users will be prompted to resolve them and then submit the form again. Upon successful registration, the user will be redirected to the login page. For users who already have an account, they can simply click on the alternative black button to navigate to the login option and access their account.

Room Management: After a successful login, users are directed to the Room Management page, where they can easily create a new room by entering a title and, optionally, a description. The description field is optional, allowing users to focus on the room title if they prefer. Additionally, users can choose to join an existing room by selecting it from the list of available rooms displayed below the room creation form. This makes it easy to either create a new space for conversation or join a pre-existing one.

Room: Once everything is set up, users will enter the room. If they are the first person to join, the room will be empty. As soon as another person enters the room, the "Call" button will become available. The second person must share their video and audio stream to confirm video and audio sharing. Both participants can then chat with each other during the conversation. After the conference, users can end the call by clicking the "End Call" button, which will redirect them back to the Room Management page.