**Sassycode’s Teams aka PolyChat**

## **Code Directory:**

* server/ : Store backend connections
  + index.js - Express server with socket io event calls and connections.
  + users.js - Utility functions to handle users - addition, removal , getting user records and list.
* client/ : React Frontend
  + src/
    - App.js: Routing connections to different pages in the web app.
    - Firebase.js: Firebase config for initialization
    - Styles.css: CSS styles for Login, AddRoom, RoonList and ChatRoom pages
    - components/
      * Session/ - Components of Call session page
        + Call: Main Call Page
        + Chat: In-call chatting container
        + IconList: Command Bar with toggle buttons to features
        + OnlinePeople: Online call participant list
        + Subtitles: Displaying speaker and their subtitled text
        + Video: Video cell with username added in the video grid.
      * AddRoom.js: Add Room page
      * ChatRoom.js: Chat room with options to start video calls and converse before and after a call.
      * Login.js: Login Page
      * RoomList.js: Displaying list of available public rooms and option to add new rooms
    - img/ Background Images of different pages of web app, downloaded from Unsplash

## **Features:**

* User login
* Creating and joining public teams channels
* Teams chatting before and after the call :
  + User joining/leaving event notifications
  + List of online Team Participants
  + Start video call with room users
  + Exit the chat room
* Multi-user video call :
  + Contains the video elements of the call participants
  + Updates size/ position dynamically according to number of users/ window size
* User-friendly commands bar with toggle buttons:
  + Mute/ Unmute Microphone
  + Switch camera on/Off
  + Display real-time speech-to-text transcript of Speaker
  + Add Collaborative Meeting Notes
  + Raise/Lower Hand
  + Display/ invite meeting participants
  + Leave call meeting
* Enabling /disabling microphone
* Enabling /disabling camera
* In -call Team messaging
  + Temporary Real-time messaging
  + Uses socket-io connection from the express server
  + Notifies other users in call about events like -
    - new user joining,
    - user leaving,
    - user raising hand to speak in call
* Real-time speech-to-text transcription
  + Real-Time Speech To Text transcription of the Meeting Speaker's speech.
  + Useful in meetings with one main speaker and other listeners - i.e. only 1 unmuted mic
* Collaborative meeting notes
  + Real-time text updation of notes across online team call users.
  + Option to copy the notes to clipboard and share with others.
  + Adjustable notepad height to accommodate long texts.
* Raising /Lowering hand to speak in meeting
  + Users can Raise/Lower Hand to notify others in the Call if they want to speak
* Call Participant List with meeting invitations:
  + Display list of meeting members present in call
  + Invite others to join the meeting and the call through default mail app or through gmail
* Leave Call option:
  + Removes socket connection and notifies others in call about this event through chat.