

Microsoft Teams Clone Tour and Features

• **Structure –**

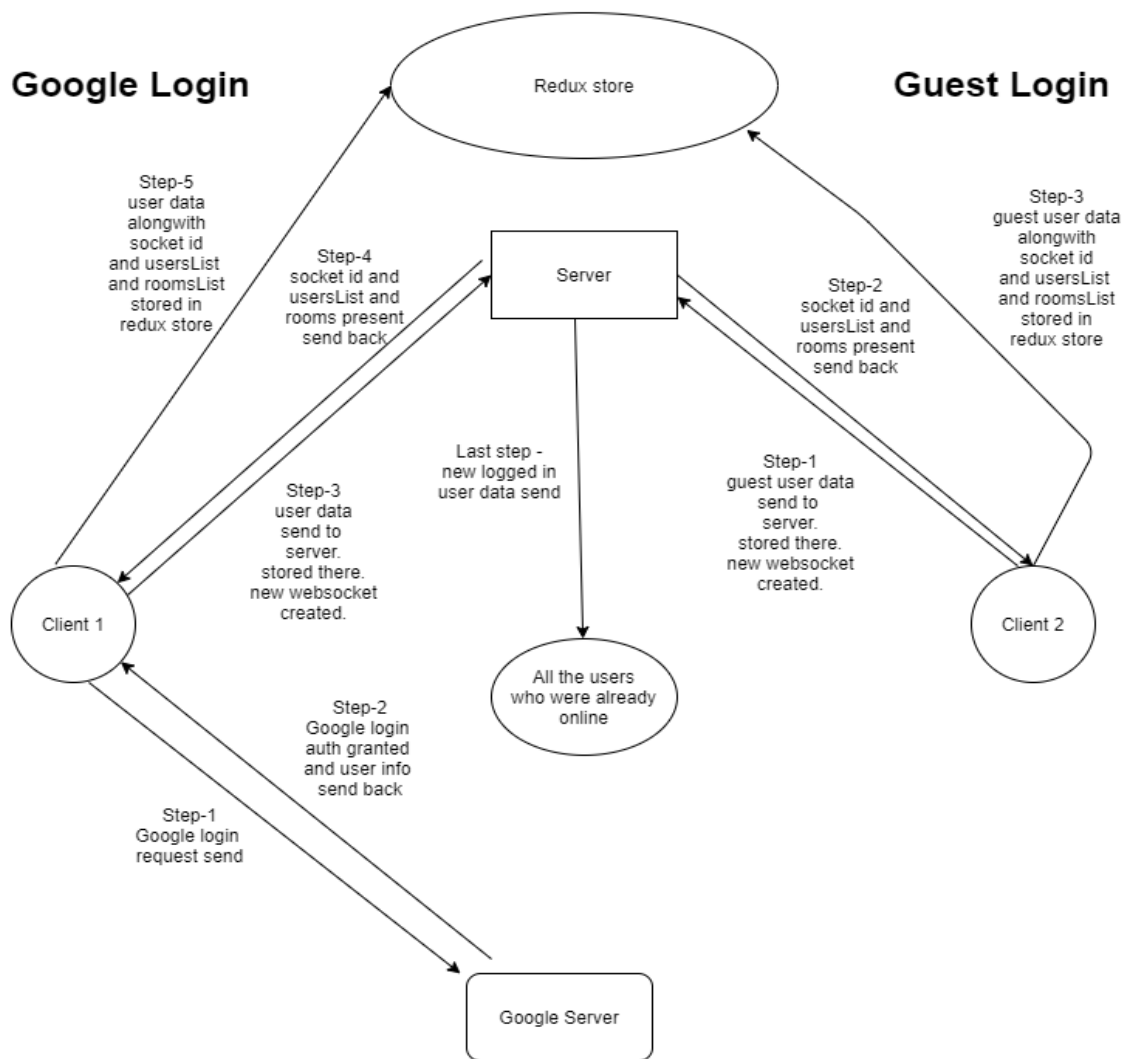
The Tech stack for this project includes -

- React js
- Node js
- Socket.io for web sockets
- Simple-peer for peer connections
- Webrtc for media sharing
- CSS for styling
- Material-UI library for icons
- Redux store

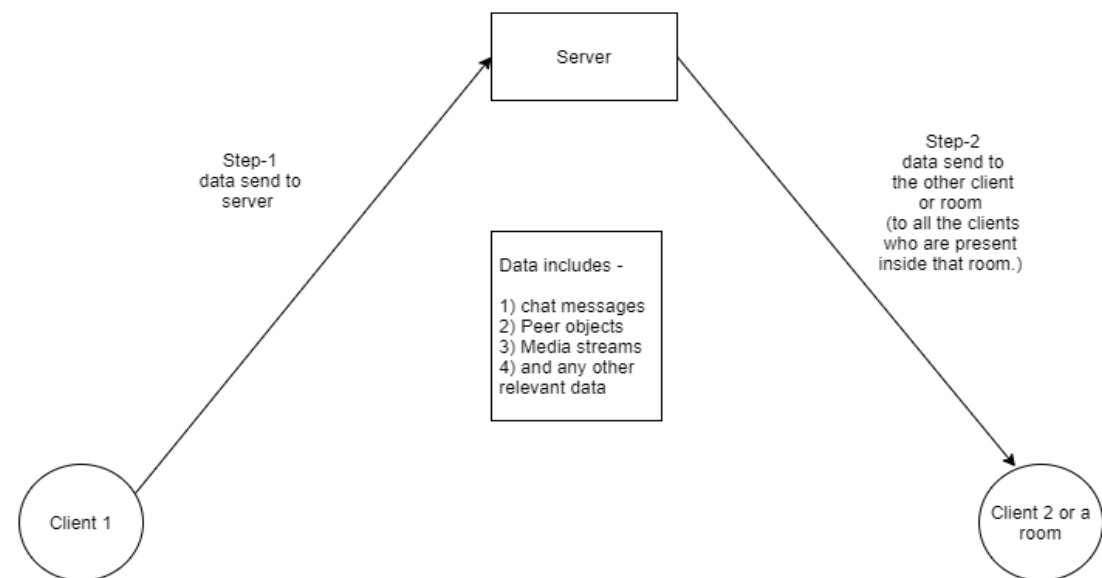
The Features this project includes -

- One to one video call
- Call accept and call deny
- Mute mic
- Pause camera
- Chat one-to-one
- Making private (with passwords) and public rooms
- Chatting in rooms
- User authentication
- Logging out
- Sending emoticons
- Creating and joining invite links
- N people video call
- Chatting during group video call
- Chat before joining the video call
- Continue conversation after leaving the group video call in meeting rooms
- Joining and unjoining rooms
- Copy room name, room password and invite links
- Seeing the list of all the people present in a group video call
- Sound on receiving a one-to-one video call from any user

Login in



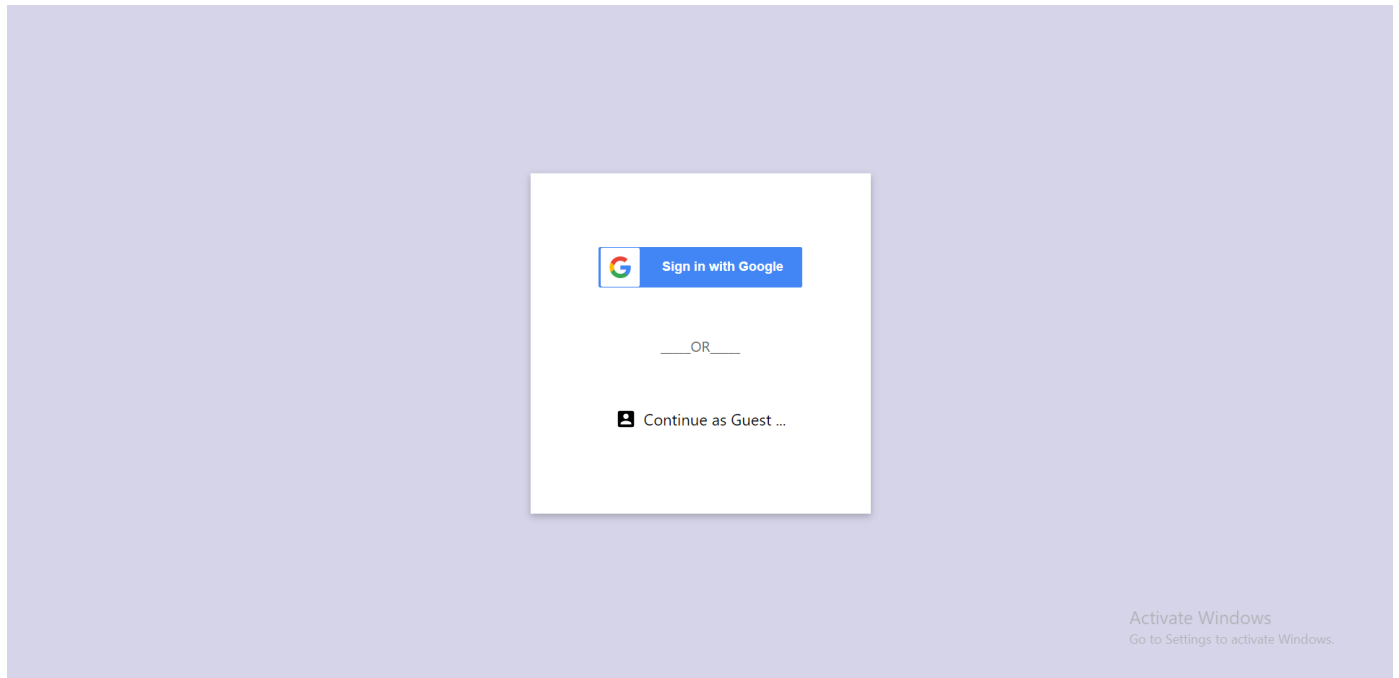
Sending Data To and Fro between Users or to Rooms



- **Tour -**

Visit site - <https://teams-clone-d4985.web.app/>

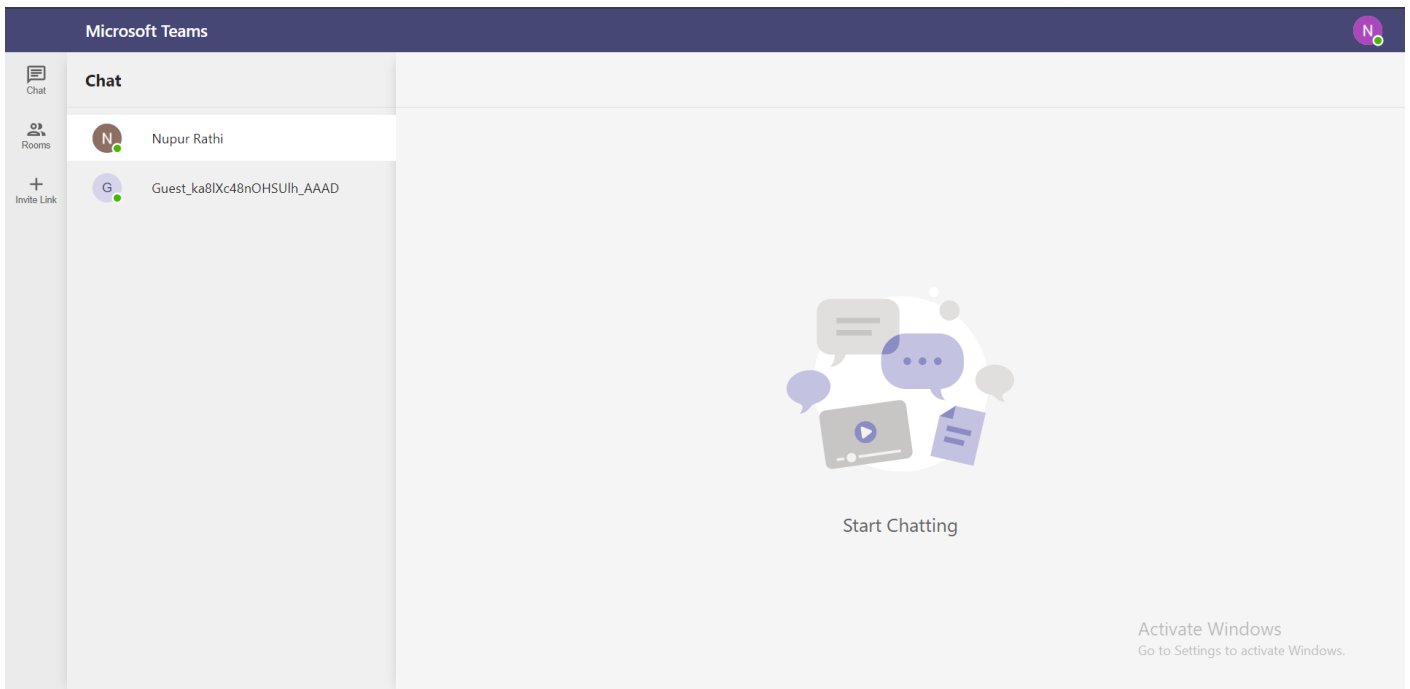
- **Authentication Page –**



- Here you can sign in with Google if you have a Google account.
- Or you can “continue as guest” if you don’t have a Google account or for any reason doesn’t want to sign in with Google.
- You will be directed to teams page.

- **Teams Page –**

- **Initial page –**

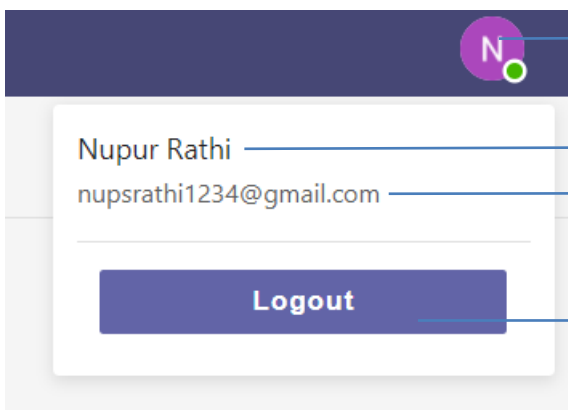


➤ Header –



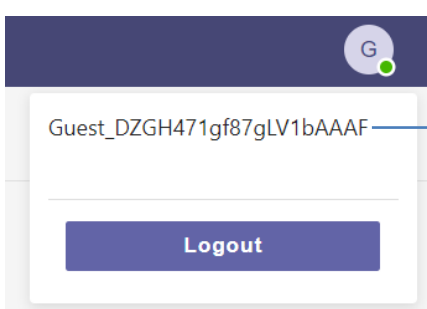
On clicking the avatar on right corner of header user info dropdown will open and again clicking the avatar user info dropdown will get closed.

▪ User Info Dropdown –



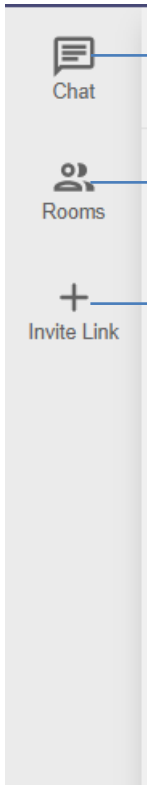
Your image and name associated with your email id will appear here along with your email id if you sign in with Google.

You can logout from teams page by clicking this logout button and you will be directed to authentication page. Once you logout your all the info and chats will be lost.



If you log in as guest your user name will be initialized as Guest_socketID

- Side Navigation Bar –



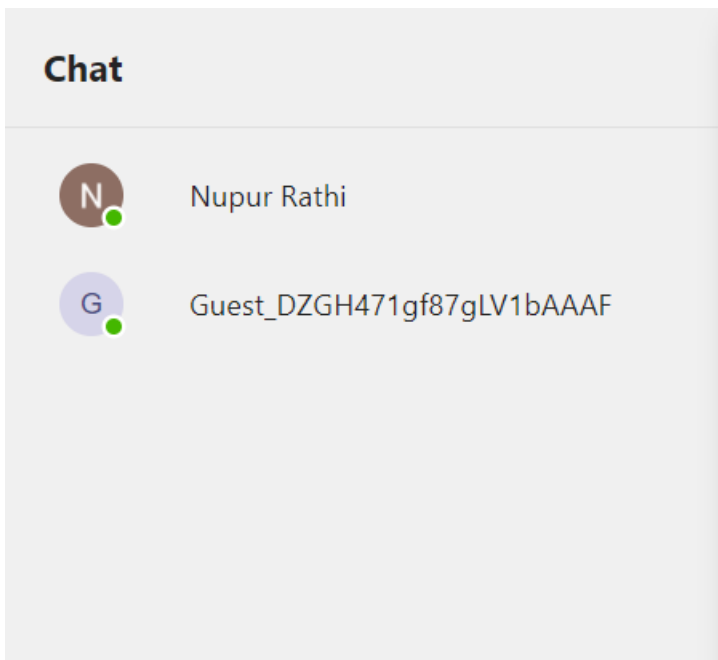
The side navigation bar is a vertical grey bar on the left side of the screen. It contains three icons: a speech bubble icon labeled 'Chat', a group of people icon labeled 'Rooms', and a plus sign icon labeled 'Invite Link'. Blue arrows point from each icon to a corresponding text box on the right.

On clicking Chat icon you can view all the online users and chat with them and can have one to one video call with them.

On clicking Rooms icon you can view all the public rooms and private rooms, create room and join rooms.

On clicking Invite Link icon a popup will appear. You can create links and join links and also see the links you have created till now.

- Side Bar –

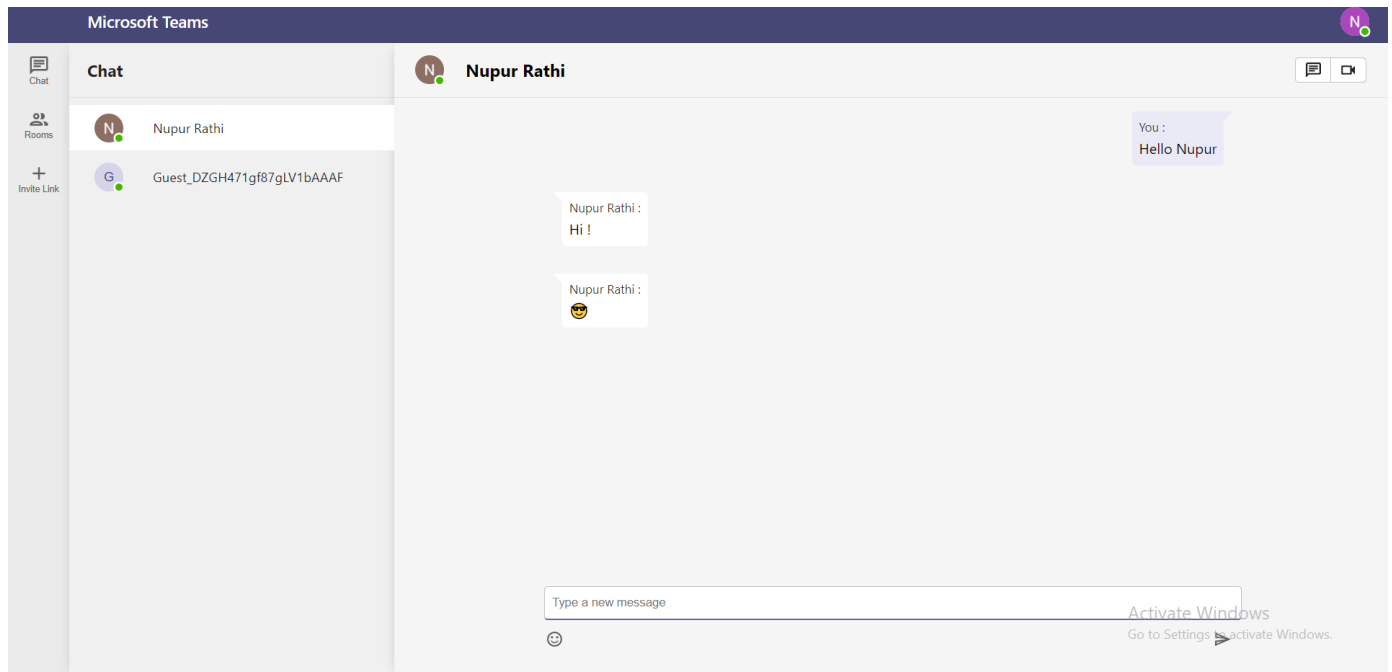


The side bar is a light grey vertical panel. At the top, it has the title 'Chat'. Below the title, there is a list of online users. Each user is represented by a circular avatar with a letter, a small green dot indicating they are online, and their name. The first user is 'Nupur Rathi' with a brown avatar containing the letter 'N'. The second user is 'Guest_DZGH471gf87gLV1bAAAF' with a purple avatar containing the letter 'G'.

On selecting Chat from side navigation bar Chats will appear on side bar and all the users who will be online at that time will appear. If any user logout or disconnects his/her name will get disappeared from side bar. You can select any user to chat or video call with them.

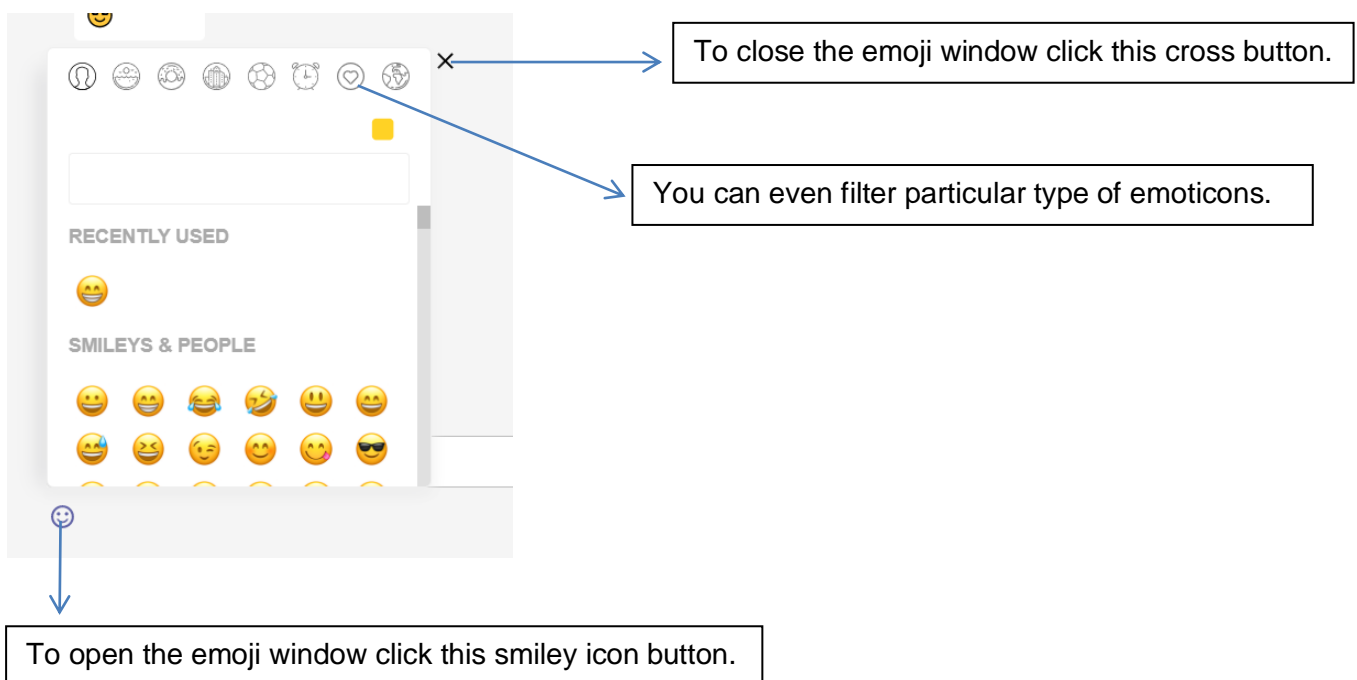
- On selecting any user –

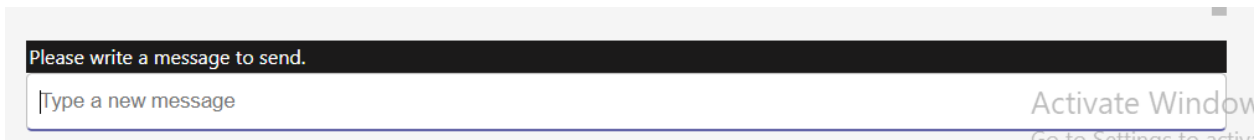
Their name will appear on the main container header and you can send text messages to them including emojis. If you select any other person and again select the previous person the chat still remains. The messages that you send will appear on right side and the messages received from others will appear on left side along with their name on top. You can either send message by clicking send button on left bottom corner or by pressing enter key.



- Selecting and sending emojis –

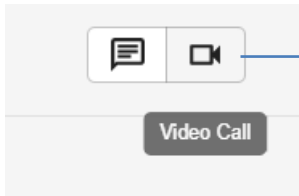
You can select any emoji by clicking on it and it will appear in your input message box.





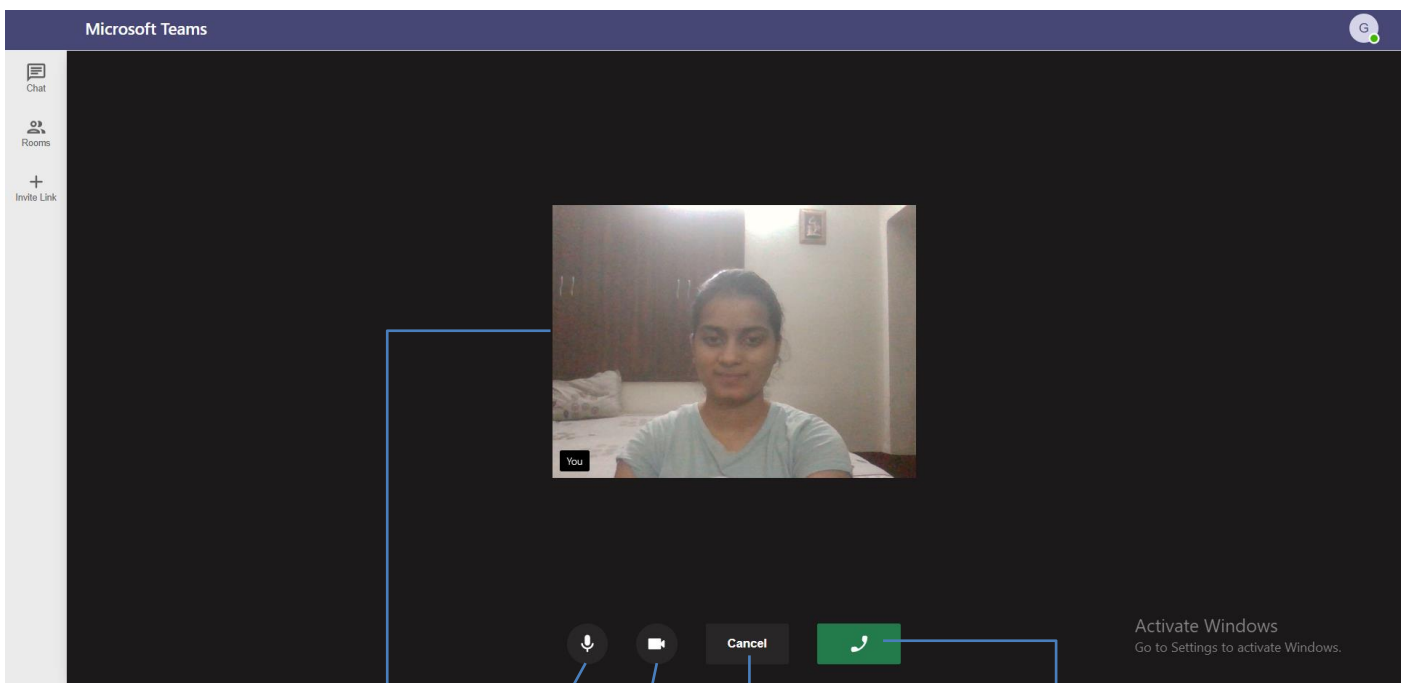
If message box is empty and you clicked enter or send message icon this message will appear.

▪ One to One video call with selected person –



On clicking this video call button Video window will open asking for your permission to allow access to camera and microphone. If you deny the access the video window will get closed alerting you with an error. If a user gets disconnected and you try to call him/her you will get an alert that “you cannot call this user has disconnected.”

Video window -



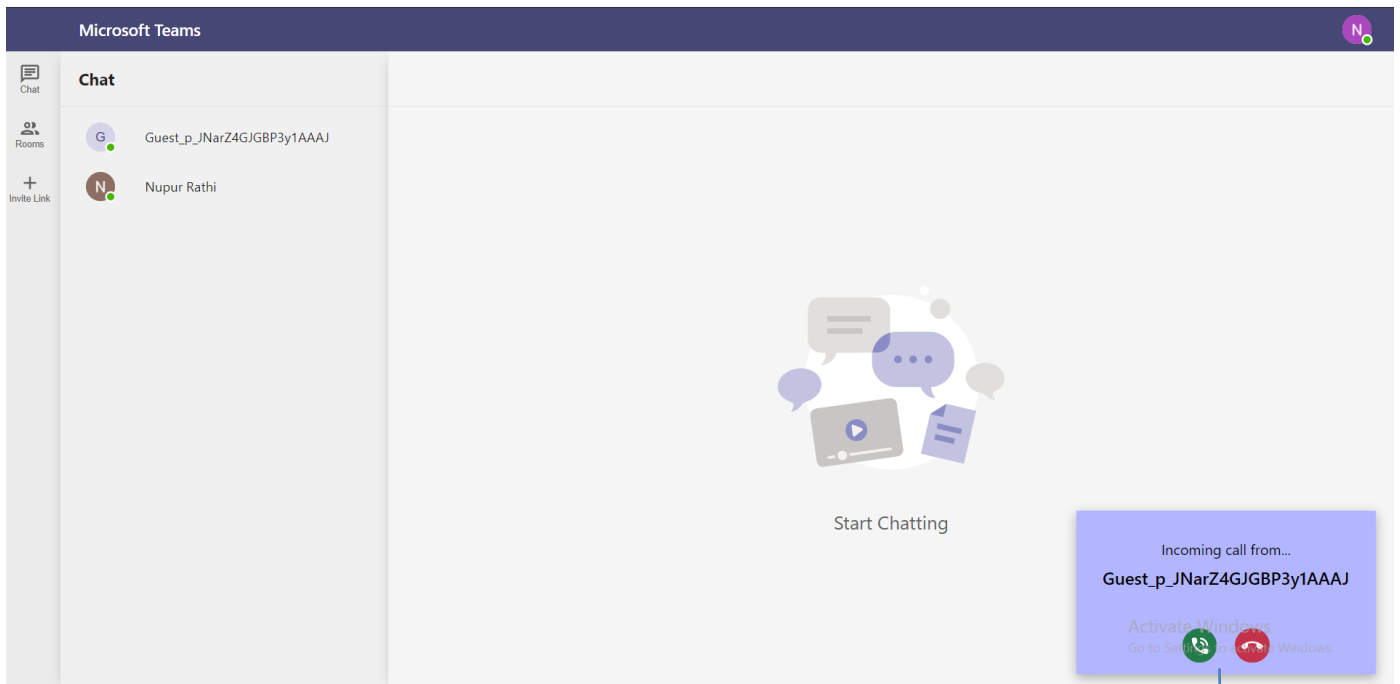
Your video and audio stream will appear here.

You can turn off or on your mic from here.

You can turn off or on your camera from here.

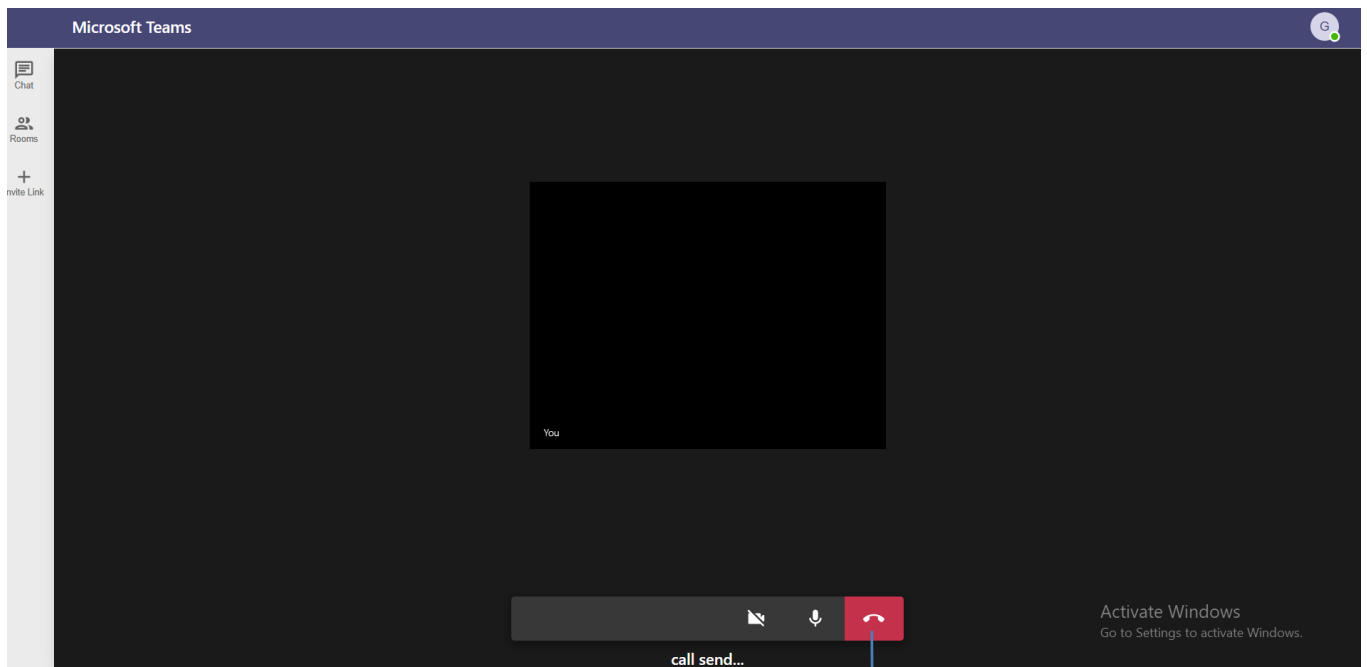
You can cancel video window from here if you by mistake open it or changed your mind.

To send a call to that particular person click this call button. Call will be sent and you will join the call.



That person will receive a call and a call popup will appear on his window. He/she will also be able to hear the ringtone. He/she can decline or accept the call. If the person declines the call then the caller will be notified that call declined and his/her video window will get closed.

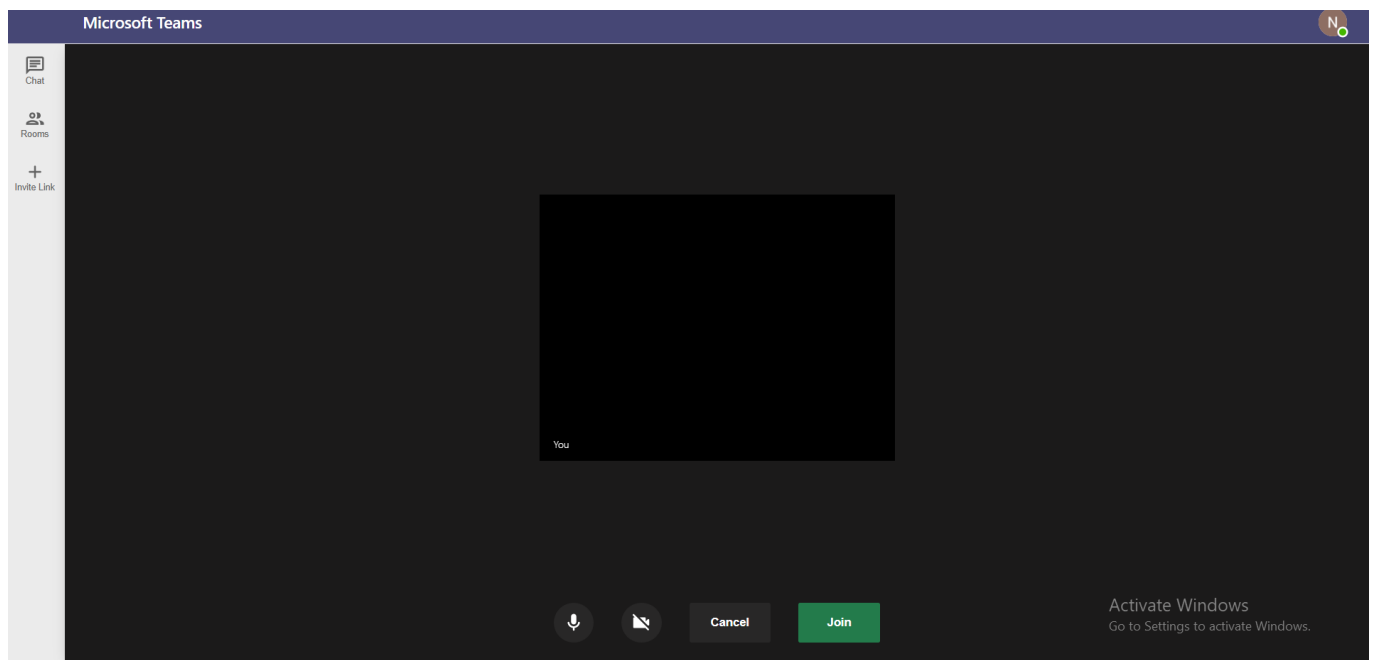
- **When you send a call –**



You can end and leave the call by clicking this button.

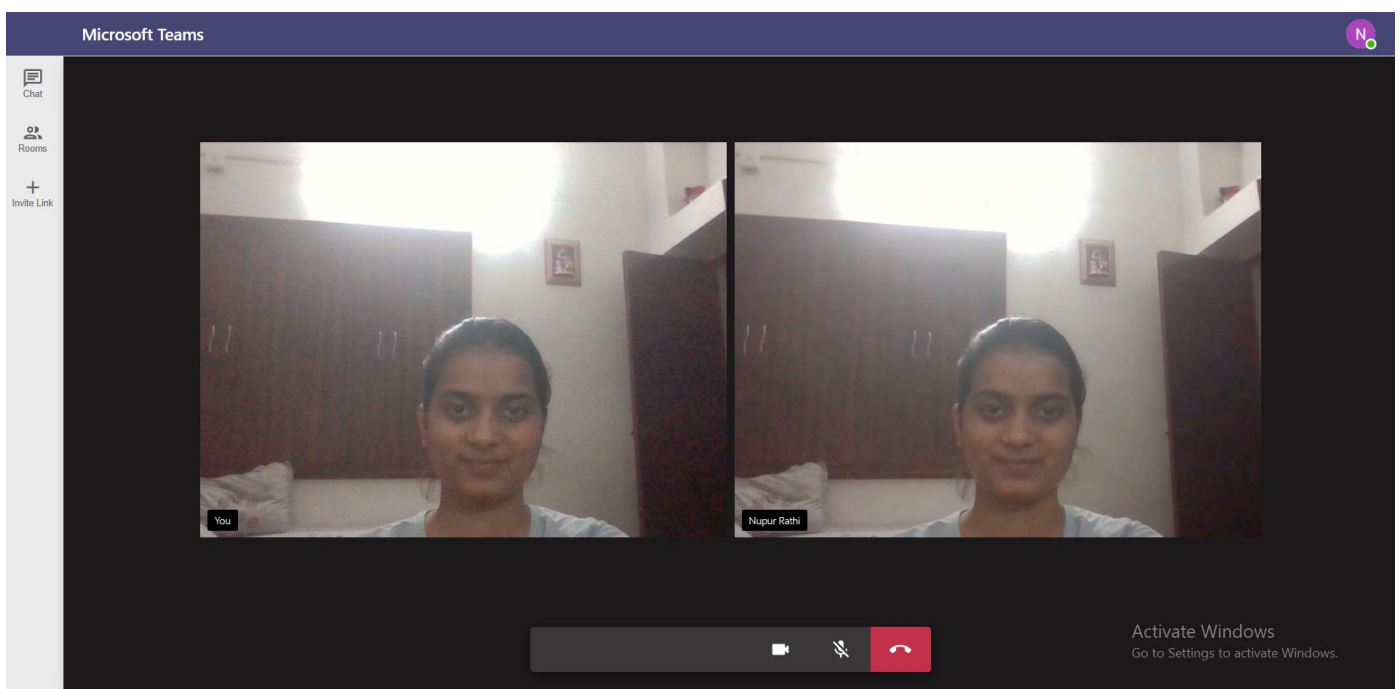
- **When other person accepts the call –**

This video window will appear with options to mute off mic and camera, cancel call and join call.



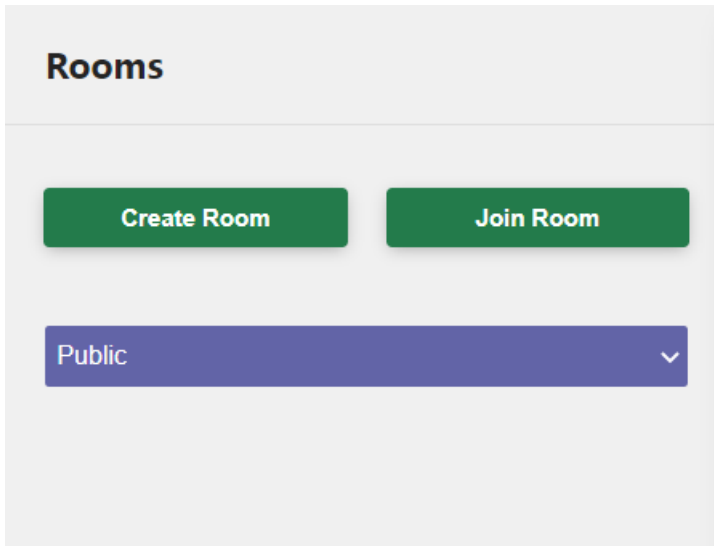
- **When both persons join the call –**

Their video streams will appear on screen with “You” for your video and “name of other person” for their video at bottom-left corner of respective video frames.



- When anyone of the two users leaves the call the other will get notified that call ended and their video window will get closed.
- When the other person cancels the call before joining or the caller cuts the call before the other person joins the call in both cases the other person will get notified of call ended.

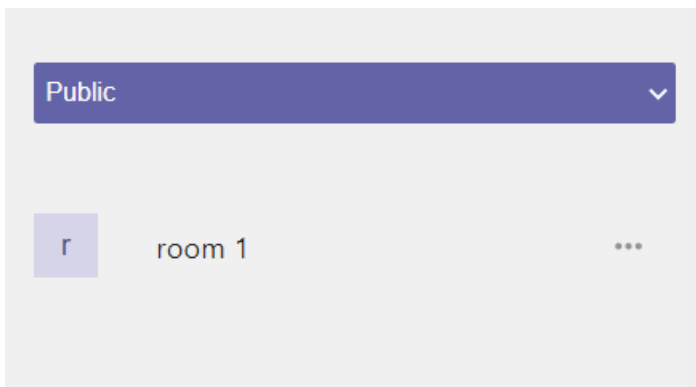
- **On clicking Rooms on side navigation bar –**



Rooms will appear. You can create rooms or join any room by clicking respective buttons shown here.

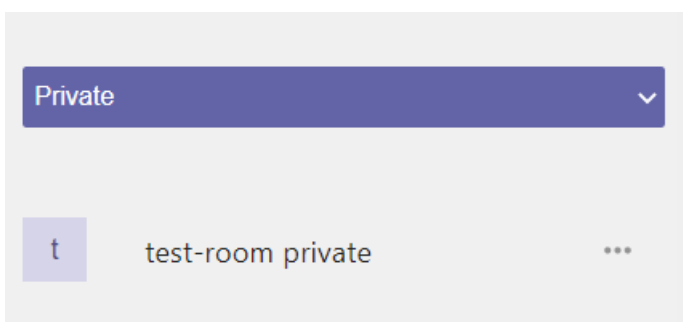
You can filter the rooms (public or private) you want to see by choosing from shown select list.

- **On selecting public –**



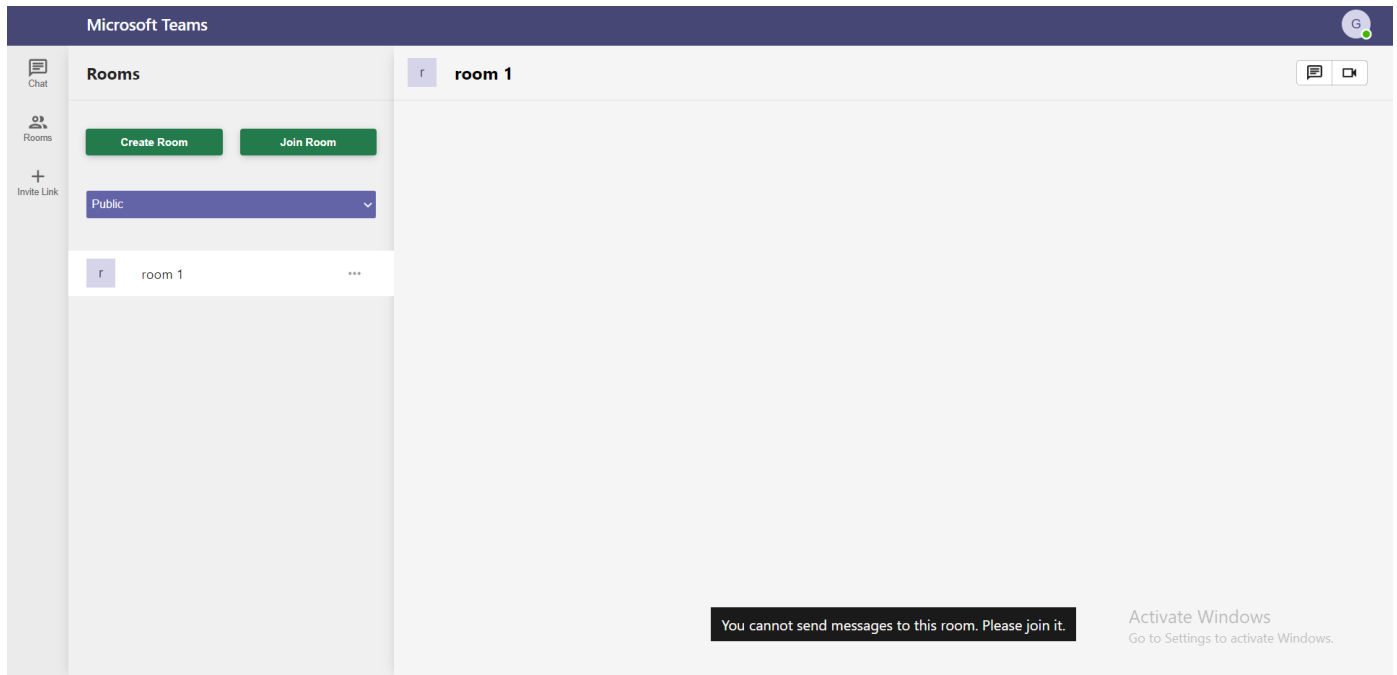
All the public rooms whether created by you or any other user and whether you have joined it or not will get listed here. You can select any room from the list.

- **On selecting private –**

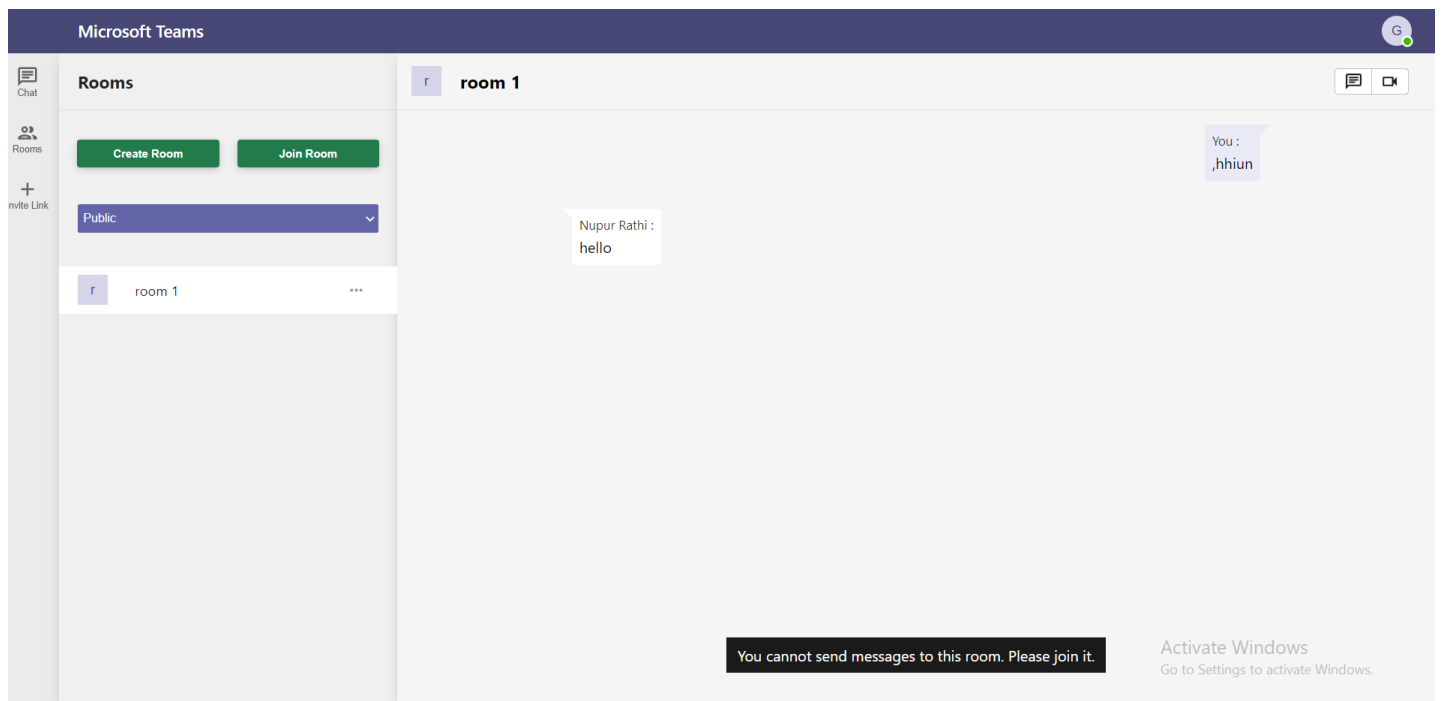


All the private rooms that you have joined will get listed here. You can select any room from the list.

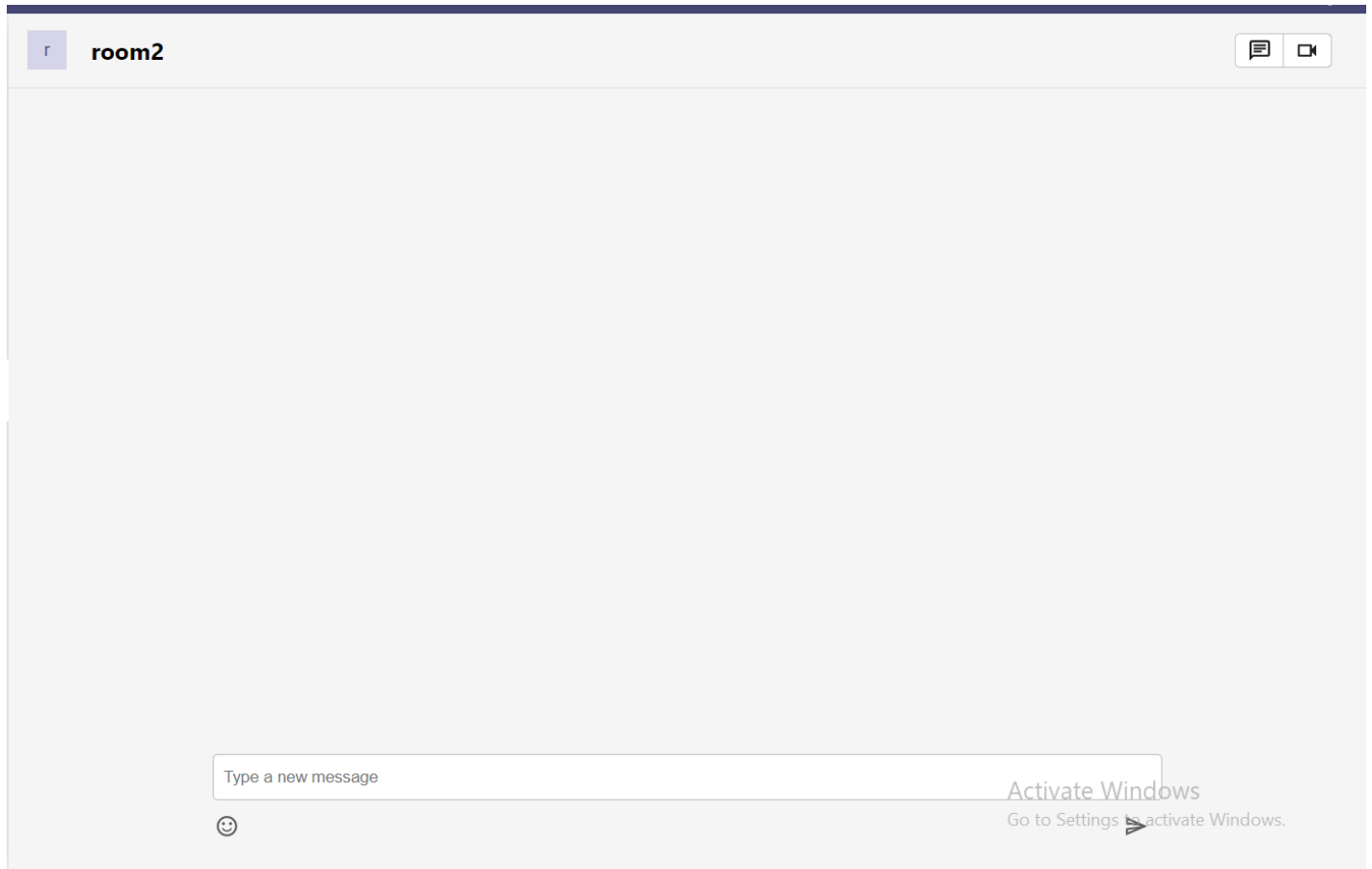
- When selecting a un-joined room –



The chat window for that room will open with a message shown above. However if you have previously joined the room and then un-joined it then you cannot send messages to that room now but will be able to see the messages which were send in this group when you had still joined it.



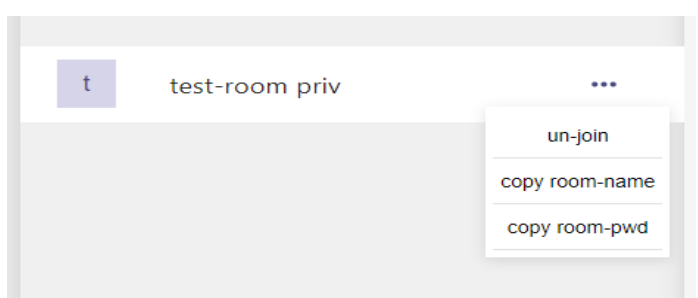
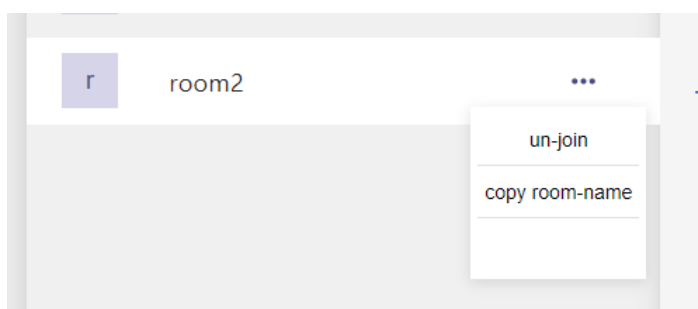
- **On joining the room –**



You will be able to send messages to this room. You cannot video call in these rooms created by using create room button. These rooms are only for chatting purpose. To create room for video calls you have to create a link.

- **Joining and un-joining rooms, copying room name and room password –**

❖ For public rooms we don't have any passwords.

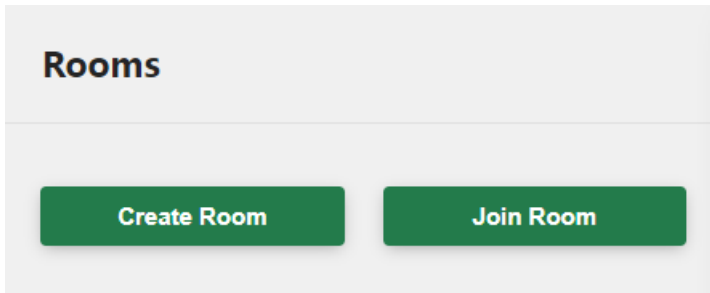


On clicking these three dots on any room a room info popup will appear. You can close the popup by again clicking the three dots. When you un-join a private room it will get disappeared from the side bar private list.

The options to join or un-join the room will appear if you have not joined or joined the room respectively.

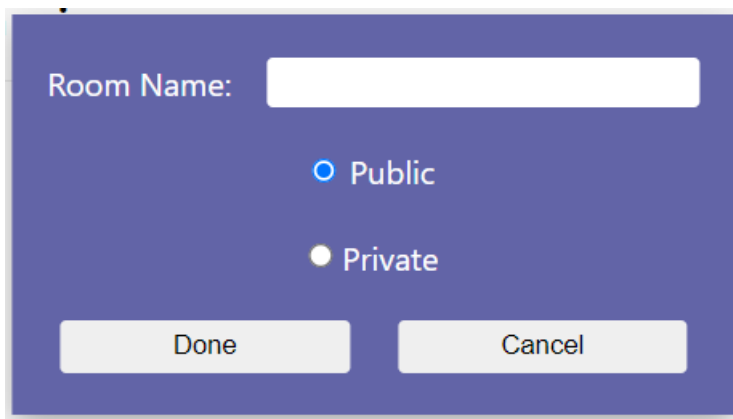
The option to copy room name (for both private and public rooms) and room password (only for private rooms) will also appear.

▪ Creating Rooms –

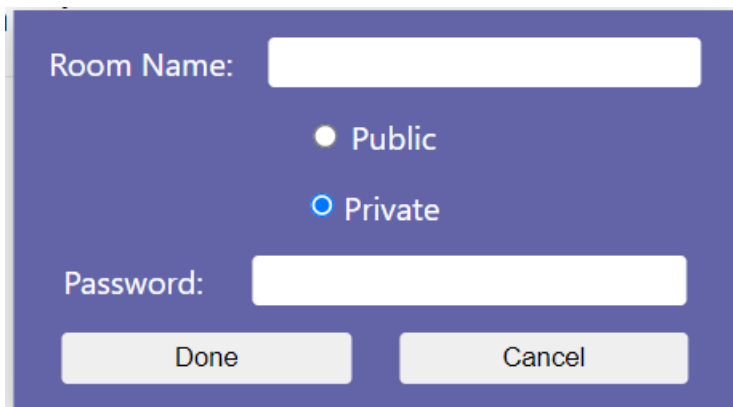


When you click the create room button on the side bar a create room pop up will appear. When you click join room button a join room popup will appear.

Create room popup –

A screenshot of a 'Create Room' popup form. It has a purple background. At the top, it says 'Room Name:' followed by a white text input field. Below that are two radio buttons: 'Public' (selected) and 'Private'. At the bottom are two white buttons: 'Done' and 'Cancel'.

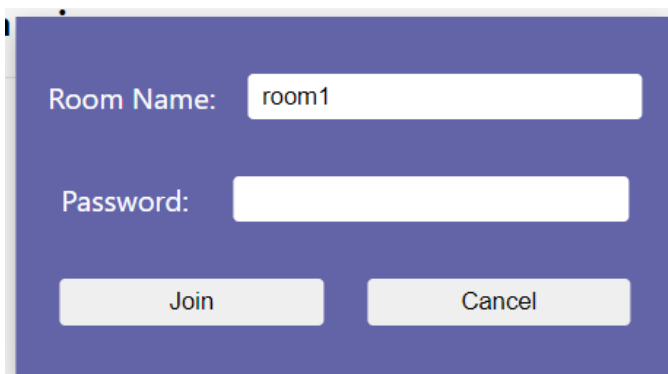
You have to enter a room name to be created. You can select private or public. If the room name you entered is already created by someone else then you cannot create a room with that name again. After entering a room name click done. If you want to close the popup click cancel.

A screenshot of the 'Create Room' popup form, similar to the previous one, but with the 'Private' radio button selected. It also includes a 'Password:' label and a white text input field for the password.

If you select private you will also have to provide a password to that room. Two rooms can have same password.

▪ Joining Room using Join room button –

Join Room Popup –

A screenshot of a 'Join Room' popup form. It has a purple background. It contains two white text input fields: 'Room Name:' (with 'room1' entered) and 'Password:'. At the bottom are two white buttons: 'Join' and 'Cancel'.

To join a room you will have to provide its room name and if it is a private room then you will also have to provide its room password. If you have already joined the room you will be alerted with "room already joined". If you enter any wrong room name or password you will be alerted accordingly.

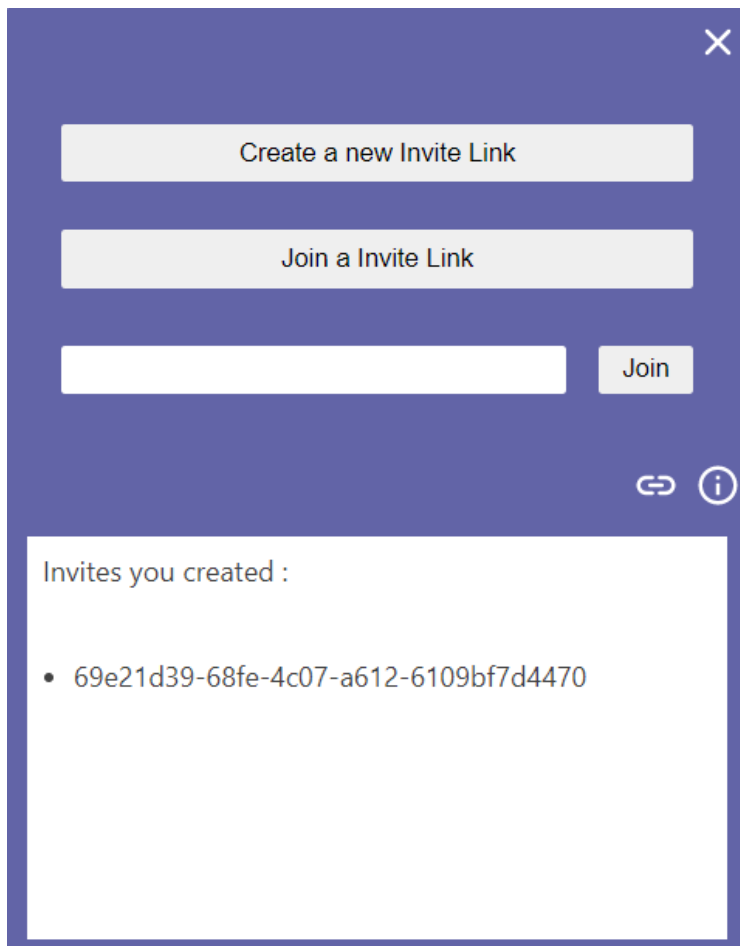
▪ **On clicking the Invite Link option in the side navigation bar –**

A popup will appear as shown below. You can close the popup by clicking the cross at the top-right corner. You can create links to have group video call.



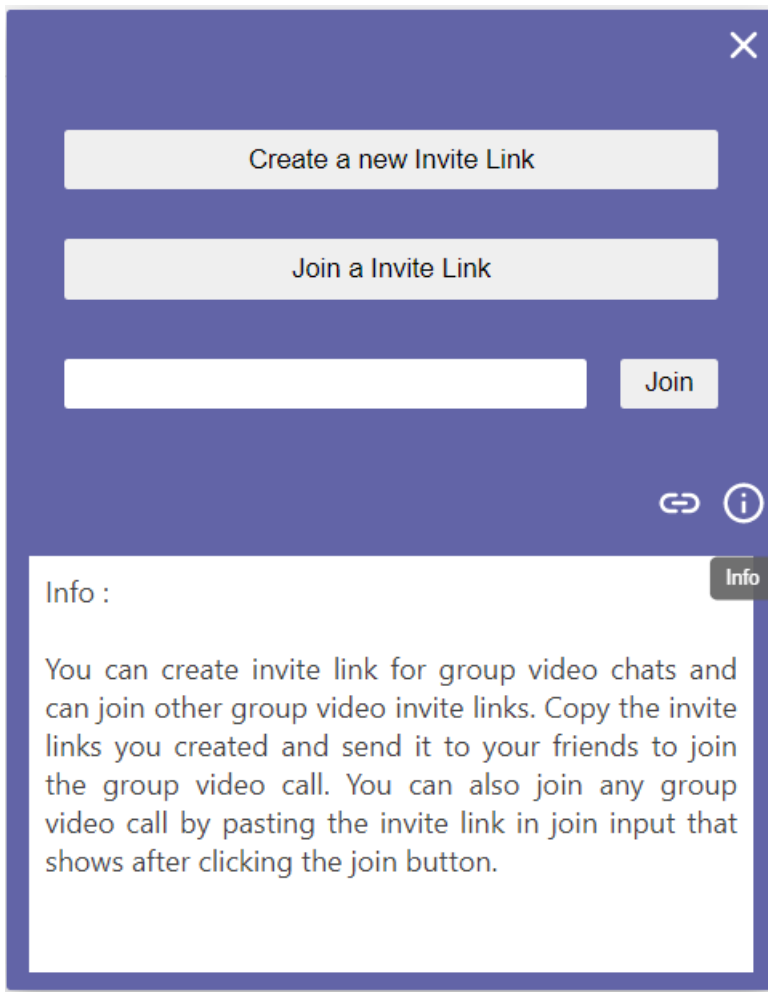
On clicking Links icon – All the invites that you have created will appear here.

You can close the expanded links popup by clicking links icon again.

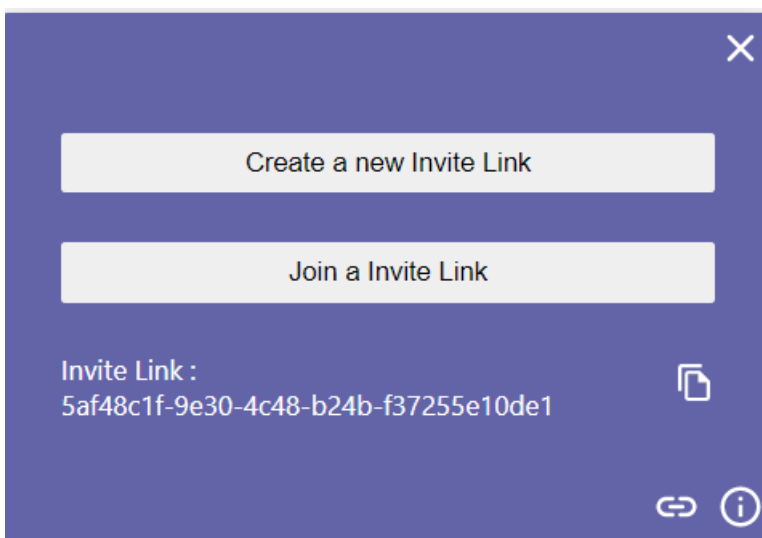


On clicking Info icon – You can read the info provided.

You can close the expanded info by clicking info icon again.

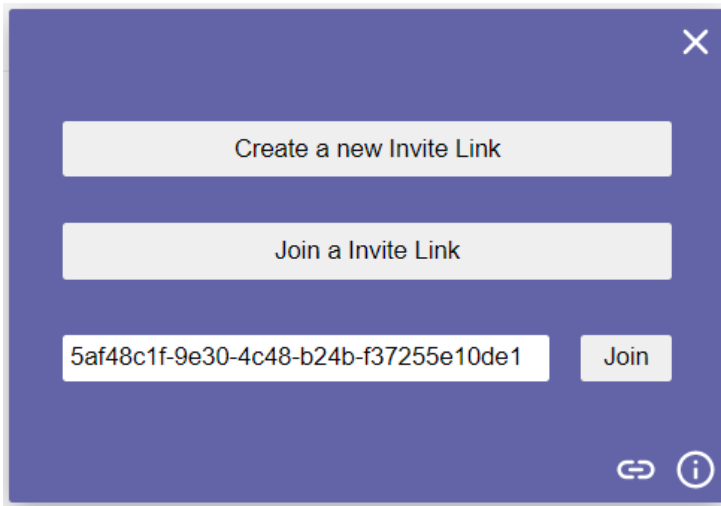


▪ **Creating Links –**



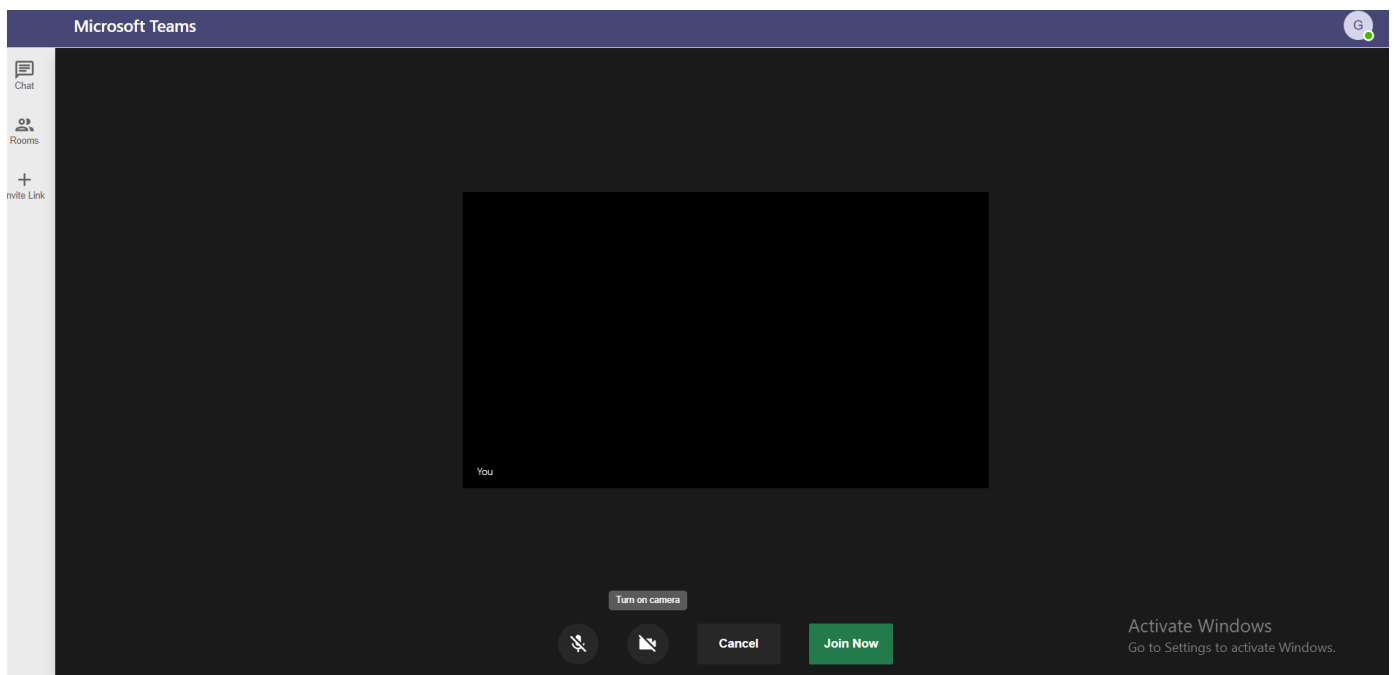
When you click create a new invite link, a new link will be created and will be shown as given here. You can copy the link by clicking the copy button provided on the right side as shown here. On creating a link you will automatically join the room associated with that link. **The rooms for the links are created as private rooms with password same as the link and room name also same as the link.**

- **To join any link –**



To join any link click join invite link button and paste the link in the input box provided and click join button. You will be directed to Group Video window. You will also automatically join the private room associated with this link.

- **On joining a invite link –**



When you click join now you will join the group call.

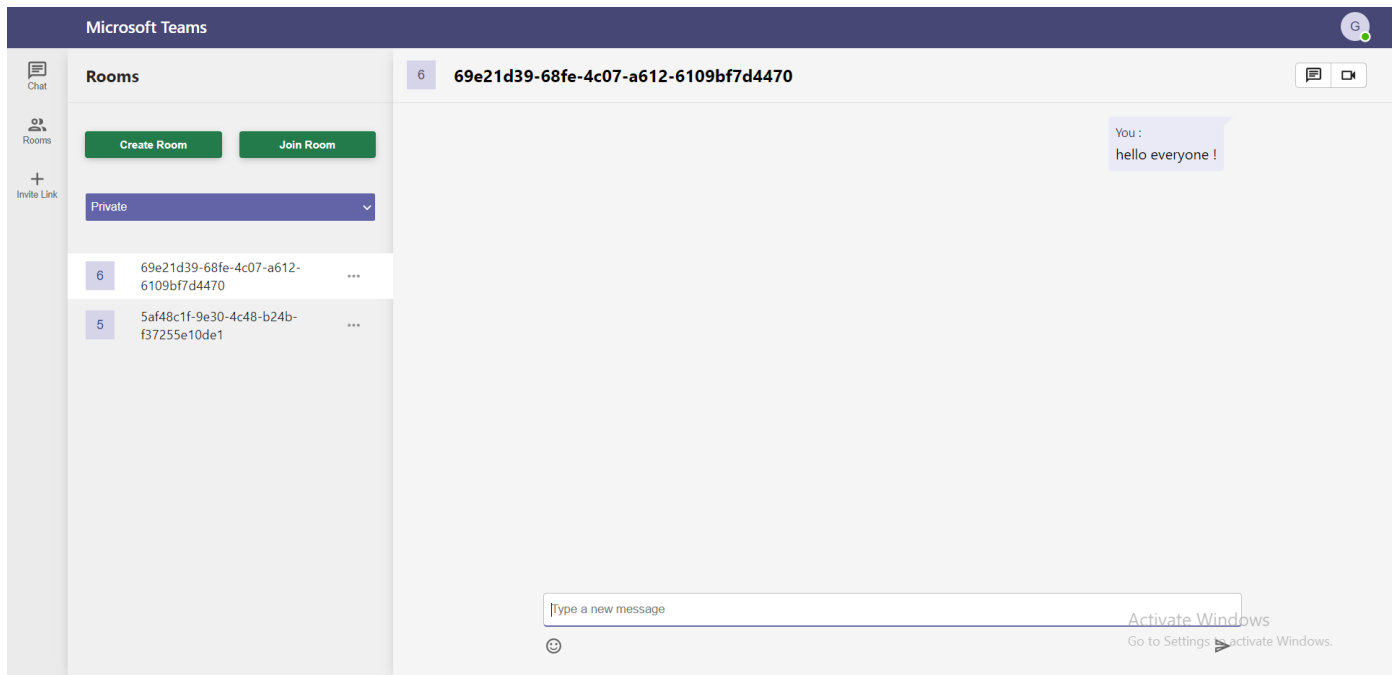
- All the links that you had joined will appear as private rooms in the side bar when you select private from select list.



A similar to other rooms you can select the particular link room and have a chat before joining the call or can see messages send during video call even after leaving the call and also continue the conversation afterwards. You can copy room name and room password and unjoin the given link room as stated above. You can also join any link room by using the join room button in rooms side bar as stated above.

- Joining a group video call –

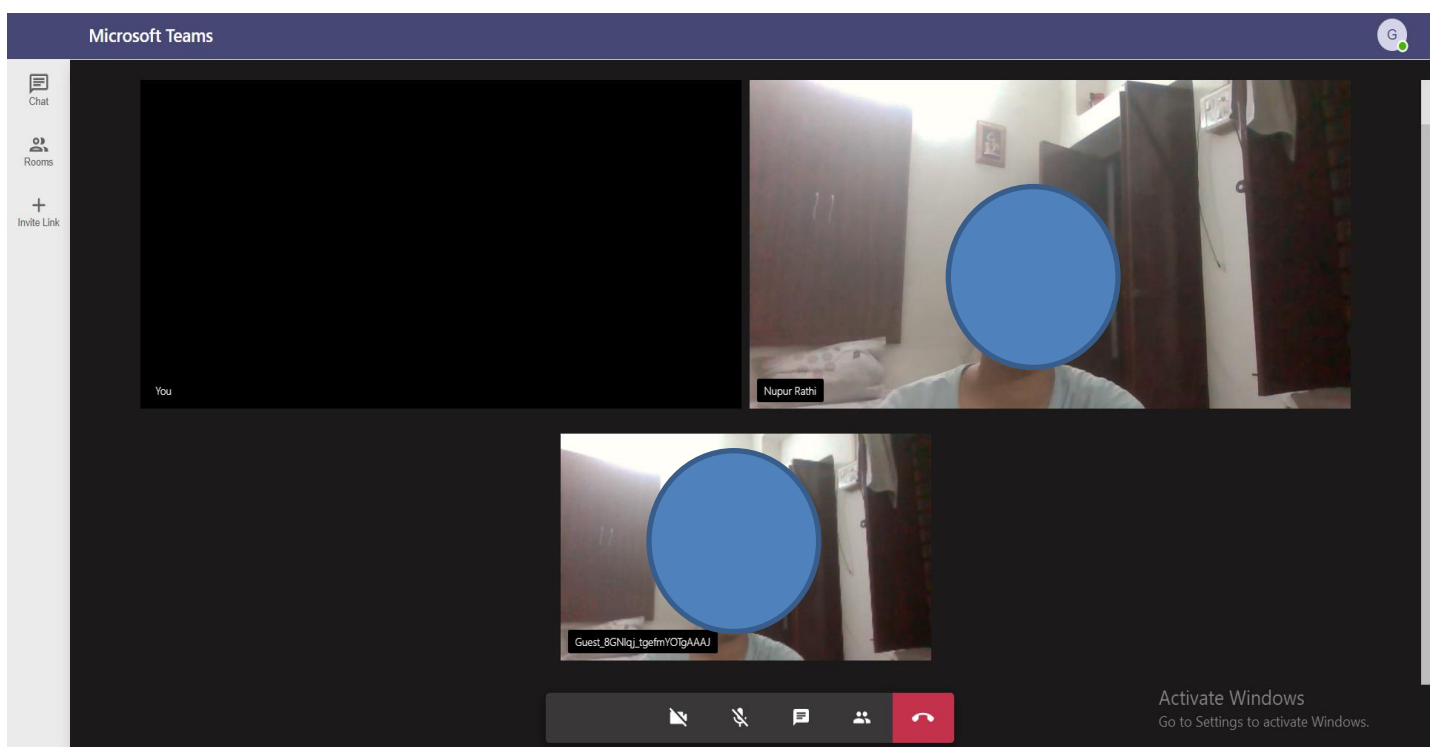
You can join a group video call by joining a valid invite link. During a group video call you can see the people present in the call, can have chat with them during the video call. If you leave the group call your media stream will stop being send to others who are still in the call.



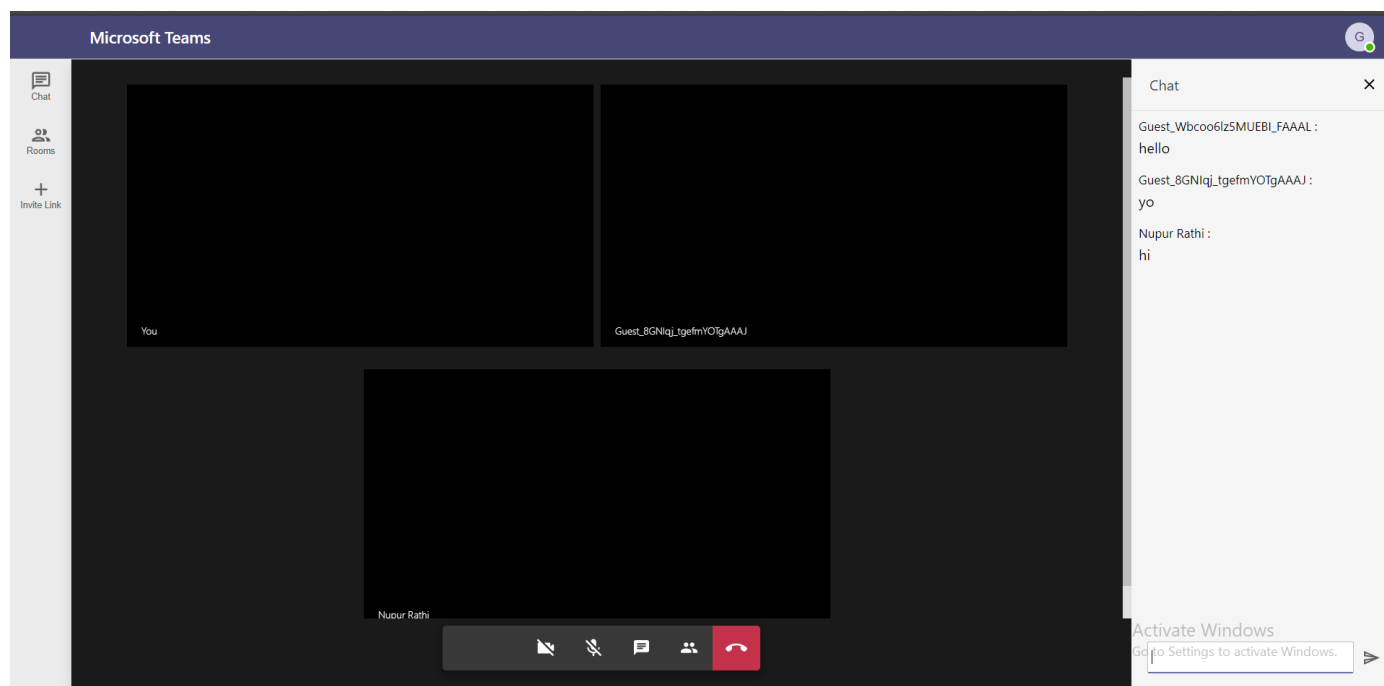
You can also join the group call by clicking the video icon button on top-right corner of that particular link room as shown above.

Here you can see that you can chat with people in this link room before joining the call.

- During the group call Window–

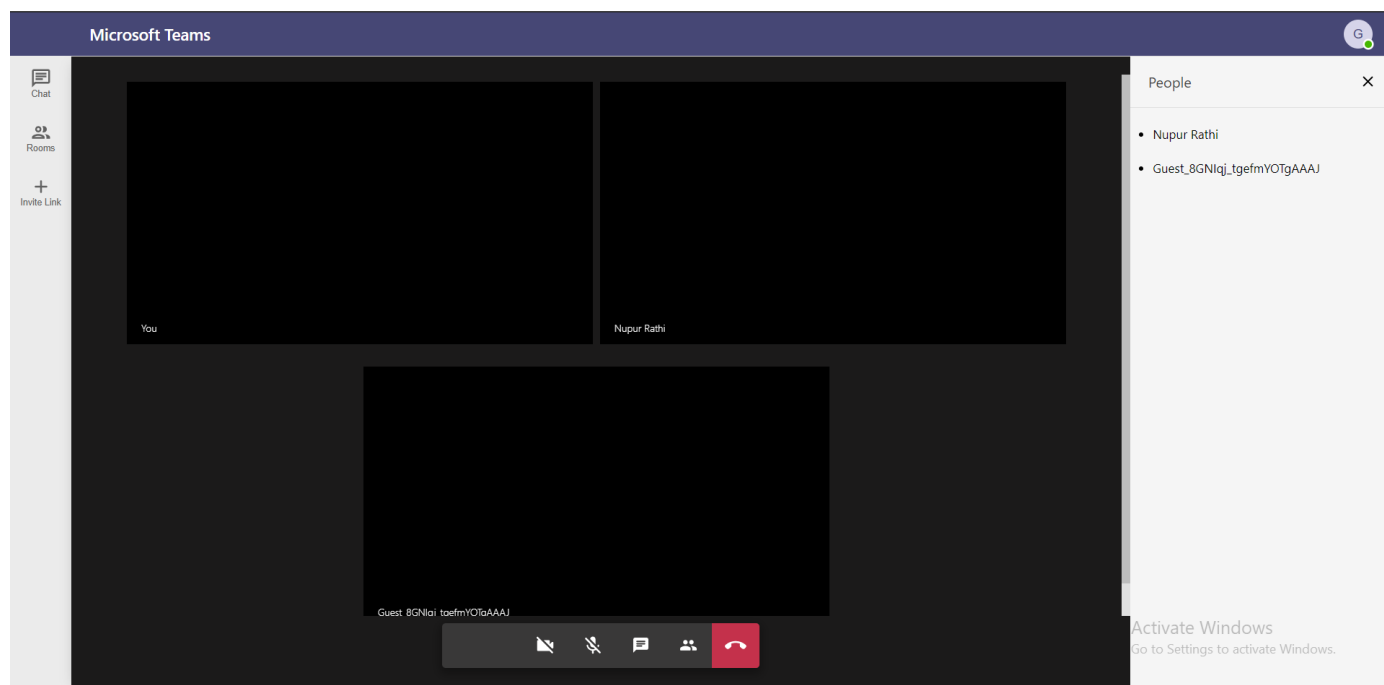


By clicking the chat button in options shown in grey box the side chat bar will appear and you can have a chat with people in this link room. As shown below -



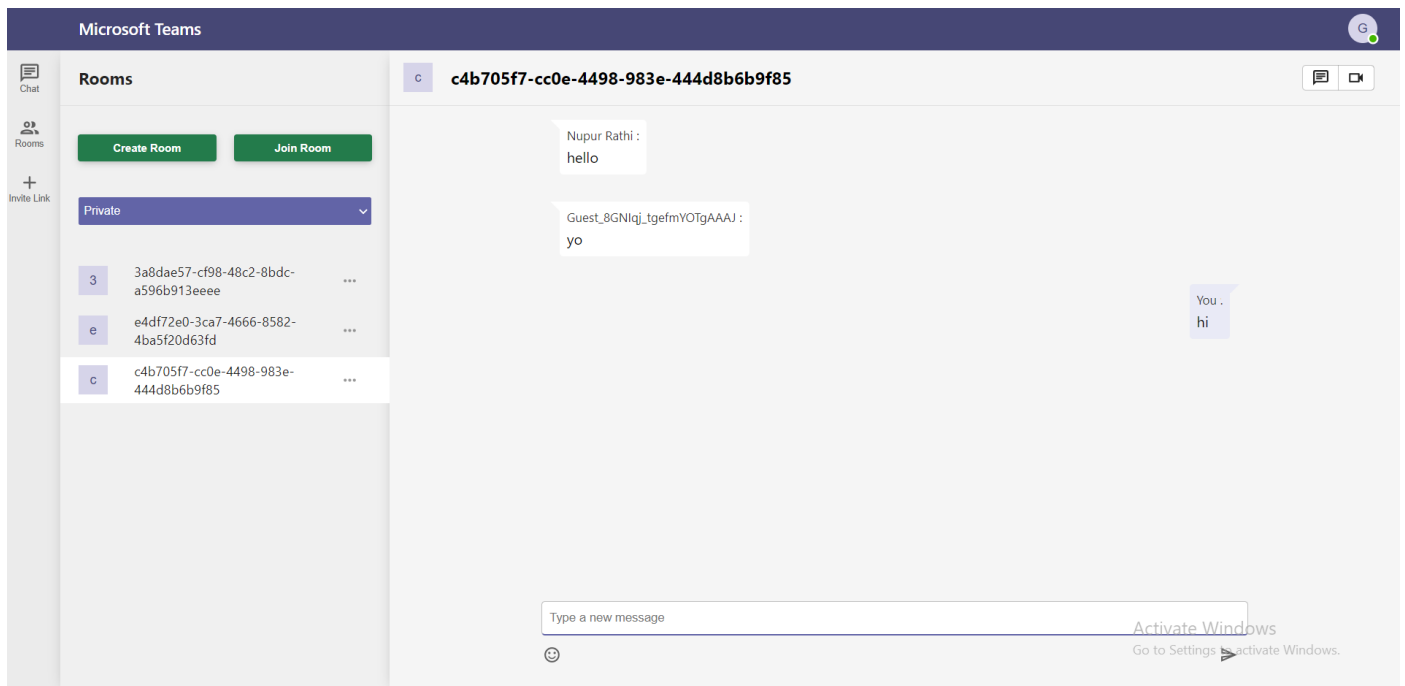
Close the chat side bar by clicking the cross on top right corner of video window.

You can also see the people present in the video call by clicking people icon in the grey box given alongside leave call option.



If more people join the call scroll below to see everyone.

You can continue your conversation in the group video call even after leaving the call. If you leave the call and send message to this link room the others present in the video call of that room will also be able to see your message. All the messages send during the call will be visible in the chat window after the call.



-----Thank You-----