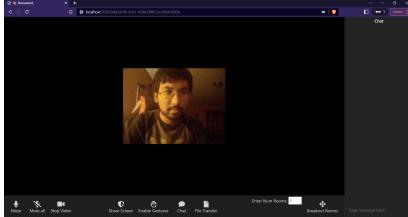
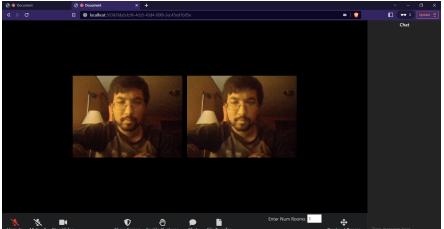
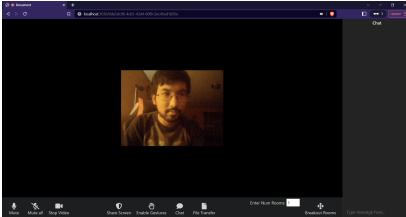
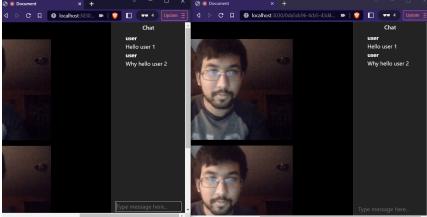
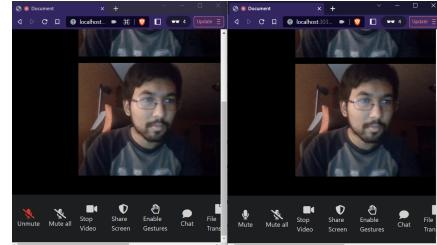
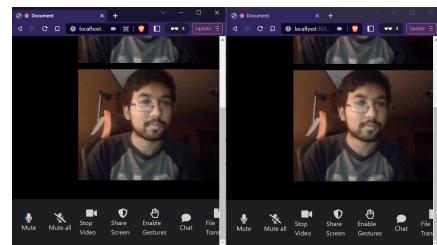


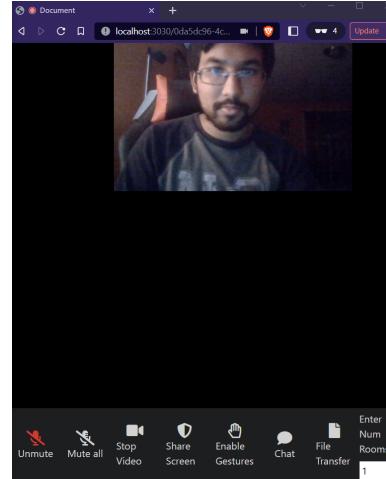
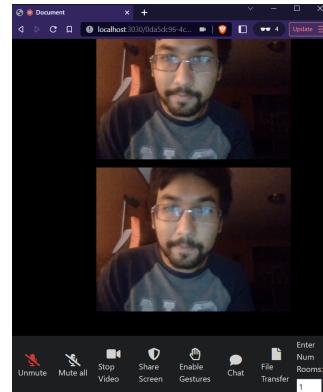
Test ID	Description	Expected Results	Actual Results
TestLaunching	<p>Tests if application launched successfully.</p> <p>-----</p> <p>Preconditions: Terminal is navigated to the root of the repo.</p> <p>Launch the application by typing `npm run start` or `npm start` in the terminal.</p> <p>In a web browser, open http://localhost:3030</p>	<p>The application should be up and running on http://localhost:3030/</p> <p>The user should be able to see controls from automatically joining a room, and other button controls for audio, video, file transfer, mute all, chat, breakout rooms, gestures, and screen sharing.</p> <p>The user should be prompted to allow the software to use their Camera and microphone. After allowing it, the user should be able to see their camera being displayed.</p> <p>The user's browser window will generate a URL specific to the room they joined.</p>	 <p>After allowing access to camera and microphone, the user is able to see controls from automatically joining a room, and other button controls for audio, video, file transfer, mute all, chat, breakout rooms, gestures, and screen sharing.</p> <p>The user's browser window generated a URL specific to the room they joined.</p>

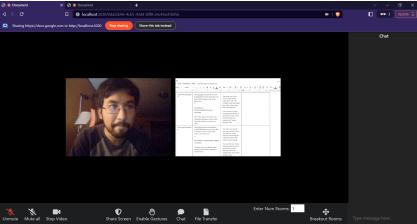
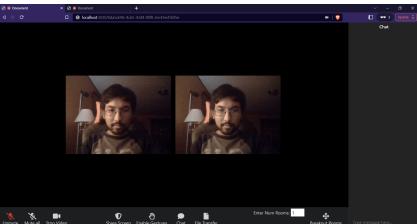
TestConnectingWithOneUser	<p>Tests if another user is able to join a room.</p> <p>---</p> <p>Preconditions: TestLaunching successful.</p> <p>In another browser window/tab, navigate to the same URL that was generated from the browser window/tab that completed TestLaunching.</p>	<p>Both users should be able to see each other and be able to communicate with each other after they both allow camera and audio permissions for the browser window/tab.</p> <p>Both users should see the same room controls.</p>	 <p>Both users are able to see each other and the room controls when navigating to the same room URL.</p>
TestConnectingWithMultipleUsers	<p>Tests if multiple users are able to join the same room.</p> <p>---</p> <p>Preconditions:</p> <p>TestConnectingWithOneUser successful.</p> <p>In seven other browser windows/tabs, navigate to the same URL that was used for TestConnectingWithOneUser.</p>	<p>Now there should be 9 users in the same room, and each user should be able to see each other and be able to communicate with each other after they both allow camera and audio permissions for the browser window/tab. All users should see the same room controls.</p>	 <p>There are 9 users in the same room, and they each are able to see each other and be able to communicate with each other after they both allow camera and audio permissions for the browser window/tab. All users should see the same room controls.</p>

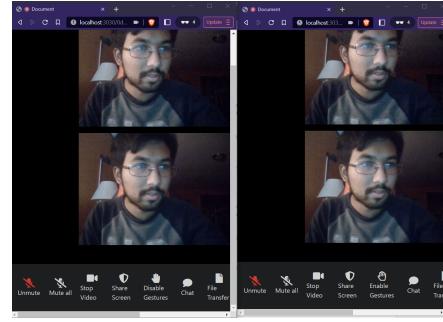
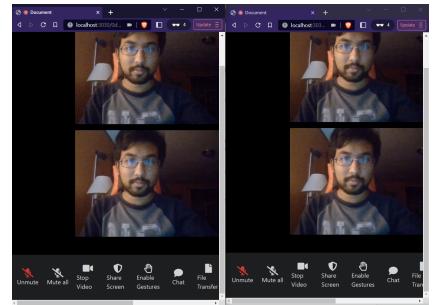
TestOneUserLeaving	<p>Tests if an existing user in a room is able to leave that room.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser successful.</p> <p>In one of the browser windows/tabs that are already open in the same room, close that window/tab.</p>	<p>Now there should only be one user in the room, and the remaining user cannot see the video of the user left, nor can that user hear the user who left.</p>	 <p>There is only one user in the room, and the remaining user cannot see the video of the user left, nor can that user hear the user who left.</p>
TestChatUtilities	<p>Tests that users are able to use and see chat messages and use the toggle button.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser successful.</p> <p>For one of the users in the room, type a message in the chat message that doesn't involve pressing enter/return. Then press enter/return to send the message.</p> <p>Then click the chat icon button twice to toggle the chat window.</p>	<p>Both users in the room should be able to see the message one of the users sent in the chat window.</p> <p>From clicking the chat icon button once, the chat window should be gone and more of the video grid space should be visible.</p> <p>From the second click, the chat window should be viewable again with the same messages.</p>	 <p>Both users are able to see the messages that they passed to each other.</p>

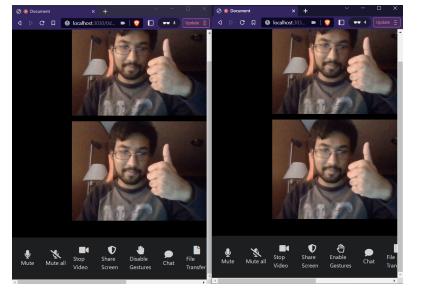
TestMuteButton	<p>Tests if Mute button for audio control works as expected for muting the microphone.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser completed.</p> <p>One of the users in the same room should click their “mute” button.</p>	<p>The other user in the same room should not be able to hear the user who clicked the mute button.</p> <p>The user who muted should now see the “unmute” button instead of the “mute” button.</p>	 <p>The other user in the same room is not able to hear the user who clicked the mute button.</p> <p>The user who muted now sees the “unmute” button instead of the “mute” button.</p>
TestUnmuteButton	<p>Tests if the Unmute button for audio control works as expected for unmuting the microphone.</p> <p>---</p> <p>Preconditions: TestMuteButton completed.</p> <p>The user who muted their audio should click their “unmute” button.</p>	<p>The other user in the same room should now be able to hear the user who clicked the unmute button.</p> <p>The user who unmuted should now see the “mute” button instead of the “unmute” button.</p>	 <p>Both users are now able to hear each other, and the user who unmuted now sees the mute button.</p>

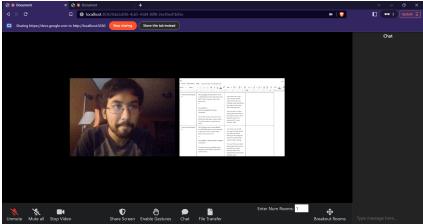
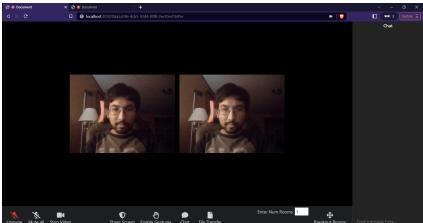
TestMuteAllButton	<p>Tests if MuteAll button for audio control works as expected for muting the microphone for all users in the room, but only if initiated by the host.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser completed.</p> <p>The user who first joined the room should click the “mute all” button.</p>	<p>Both users in the room should no longer be able to hear each other.</p> <p>Both users should now see the “unmute” button instead of the “mute” button.</p>	 <p>Both users in the room are no longer able to hear each other.</p> <p>Both users now see the “unmute” button instead of the “mute” button.</p>
TestMuteAllButtonNo Permissions	<p>Tests if MuteAll button for audio control does not mute the microphone for all users in the room if clicked on someone who isn't the person who didn't first join the room .</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser completed.</p> <p>The user who did not first join the room should click the “mute all” button.</p>	<p>Both users in the room should still be able to hear each other. There was no muting.</p> <p>Both users should continue to see their “mute” button unchanged.</p>	 <p>Both users in the room are still able to hear each other. There was no muting.</p> <p>Both users still continue to see their “mute” button unchanged.</p>

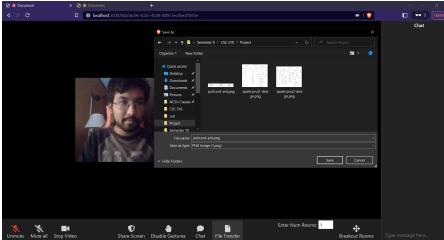
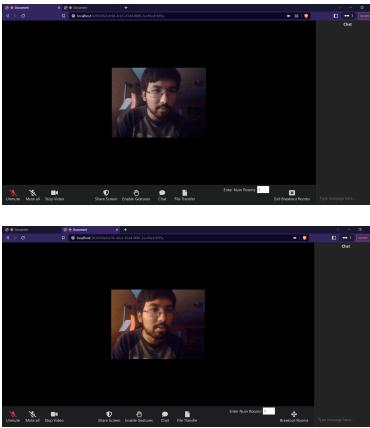
TestStopVideoButton	<p>Tests if the stop video button for camera control works as expected for turning off a user's video.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser completed.</p> <p>One of the users in the same room should click their "stop video" button.</p>	<p>The other user in the same room should not be able to see the video of the user who clicked the stop video button.</p> <p>The user who stopped their video should now see the "start video" button instead of the "play video" button.</p>	 <p>Other user in the same room no longer sees the video of the user who clicked stop video button.</p>
TestPlayVideoButton	<p>Tests if the play video button for camera control works as expected for turning on a user's video.</p> <p>---</p> <p>Preconditions: TestStopVideoButton completed.</p> <p>The user who stopped their video should click their "play video" button.</p>	<p>The other user in the same room should now be able to see the video of the user who clicked the start video button.</p> <p>The user who started their video should now see the "stop video" button instead of the "play video" button.</p>	 <p>Now other user is able to see the user who pressed Play Video.</p>

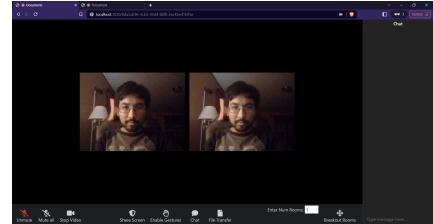
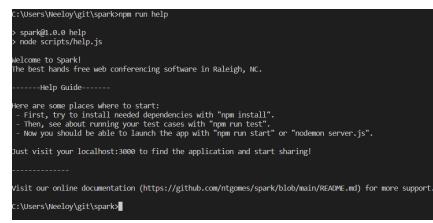
<p>TestScreenSharingStart</p> <p>Tests if screen sharing button works as expected and users are able to see each other's screens when in the same room.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser completed.</p> <p>One of the users in the same room should click the share screen button. Then they select a screen/view to share.</p>	<p>The other user in the room should see the video of the user who initiated screen sharing be the video of the screen that is being shared.</p> <p>The user that is screen sharing should be able to see that the “stop screen sharing” button has replaced the “screen sharing” video.</p>		<p>The other user in the room can see the video of the user who initiated screen sharing be the video of the screen that is being shared.</p> <p>The user that is screen sharing can see the stop screen sharing button.</p>
<p>TestScreenSharingStop</p> <p>Tests if stop screen sharing button works as expected and users are able to see each other's normal video when in the same room.</p> <p>---</p> <p>Preconditions: TestScreenSharingStart completed.</p> <p>The same user who started screen sharing should click the stop share screen button.</p>	<p>The other user should now see the video of the user that was screen sharing to be the regular video from before they started screen sharing.</p> <p>The user that was screen sharing should be able to see that the “screen sharing” button has replaced the “stop screen sharing” video.</p>		<p>The other user can now see the video of the user that was screen sharing to be the regular video from before they started screen sharing.</p> <p>The user that stopped screen sharing is able to see the “screen sharing” button.</p>

TestEnableGesturesButton	<p>Tests that gestures can be toggled on so that the system can start detecting and acting on certain gestures from the user video.</p> <p>---</p> <p>Preconditions: TestUnmuteButton completed.</p> <p>One of the users in the same room should click their “Enable Gestures” button.</p>	<p>The user that clicked the “Enable Gestures” button should now be seeing that the button has been replaced by the “Disable Gestures” button.</p> <p>The other user in the room should continue to see their “Enable Gestures” button.</p>	 <p>The expected happens exactly as stated. First user sees Disable Gestures button, and second user sees Enable Gestures button.</p>
TestDisableGesturesButton	<p>Tests that gestures can be toggled off so that the system can stop detecting and acting on certain gestures from the user video.</p> <p>---</p> <p>Preconditions:</p> <p>TestEnableGesturesButton completed.</p> <p>The same user who enabled gestures should click on their “Disable Gestures” button.</p>	<p>The user that clicked the “Disable Gestures” button should now be seeing that the button has been replaced by the “Enable Gestures” button.</p> <p>The other user in the room should continue to see their “Enable Gestures” button.</p>	 <p>The expected happens exactly as stated. First user sees Enable Gestures button, and second user also sees Enable Gestures button.</p>

TestGestureMute	<p>Tests that the “thumbs down” gesture can be used to mute the user’s audio as part of gesture functionality.</p> <p>---</p> <p>Preconditions: TestEnableGesturesButton completed.</p> <p>The user who enabled gestures can make a thumbs down gesture on their camera using one of their hands.</p>	<p>The other user in the same room should not be able to hear the user who clicked the mute button.</p> <p>The user who muted should now see the “unmute” button instead of the “mute” button.</p>	 <p>The other user in the same room is not able to hear the user who clicked the mute button.</p> <p>The user who muted now sees the “unmute” button instead of the “mute” button.</p>
TestGestureUnmute	<p>Tests that the “thumbs up” gesture can be used to unmute the user’s audio as part of gesture functionality.</p> <p>---</p> <p>Preconditions: TestGestureMute completed.</p> <p>The user who used the “thumbs down” gesture can make a thumbs up gesture on their camera using one of their hands.</p>	<p>The other user in the same room should now be able to hear the user who clicked the unmute button.</p> <p>The user who unmuted should now see the “mute” button instead of the “unmute” button.</p>	 <p>The expected happens exactly as stated.</p>

<p>TestGestureScreenShareStart</p>	<p>Tests that a “swipe right” gesture can be used to start screen sharing as part of gesture functionality.</p> <p>---</p> <p>Preconditions: TestEnableGesturesButton completed.</p> <p>The user who enabled gestures can make a swipe right gesture on their camera using one of their hands. Then when prompted, they select one of their screens/views to share.</p>	<p>The other user in the room should see the video of the user who initiated screen sharing be the video of the screen that is being shared.</p> <p>The user that is screen sharing should be able to see that the “stop screen sharing” button has replaced the “screen sharing” video.</p>	 <p>The other user in the room can see the video of the user who initiated screen sharing be the video of the screen that is being shared.</p> <p>The user that is screen sharing can see the stop screen sharing button.</p>
<p>TestGestureScreenShareStop</p>	<p>Tests that a “swipe left” gesture can be used to stop screen sharing as part of gesture functionality.</p> <p>---</p> <p>Preconditions: TestGestureScreenShareStart completed.</p> <p>The user who enabled gestures and is screen sharing can make a swipe left gesture on their camera using one of their hands.</p>	<p>The other user should now see the video of the user that was screen sharing to be the regular video from before they started screen sharing.</p> <p>The user that was screen sharing should be able to see that the “screen sharing” button has replaced the “stop screen sharing” video.</p>	 <p>The other user can now see the video of the user that was screen sharing to be the regular video from before they started screen sharing.</p> <p>The user that stopped screen sharing is able to see the “screen sharing” button.</p>

TestFileTransfer	<p>Tests that files can be transferred from one user in the room to other users in the room.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser completed.</p> <p>One of the users in the room clicks the ‘File Transfer’ button, and then selects and submits a file from their machine to share.</p>	<p>All users in the room get a prompt to save and download the file that was shared by the user that shared the file.</p> <p>Any user that got the prompt can choose to save or cancel the file to be downloaded.</p>	 <p>The user gets a file download prompt which indicates that the file download call was successful by the application.</p>
TestBreakoutRoomEnter	<p>Tests that the host can put non-hosts in the room to separate breakout rooms.</p> <p>---</p> <p>Preconditions: TestConnectingWithOneUser completed.</p> <p>The person who first joined the room sets the number of breakout rooms to 1, and then clicks the “Enter Breakout Room” button.</p>	<p>The host who clicked the breakout rooms button can see that the other user is gone from the room.</p> <p>The other user can no longer see the host’s video or hear the host’s audio.</p> <p>The host can also see that the “Enter Breakout Rooms” button is replaced by the “Exit Breakout Rooms” button.</p>	 <p>The non-host user is gone from the main room, and is in the breakout room. Host can see the Exit Breakout Rooms button.</p>

TestBreakoutRoomExit	<p>Tests that the host can put non-hosts in the breakout room back to the main room.</p> <p>---</p> <p>Preconditions: TestBreakoutRoomEnter completed.</p> <p>The person who clicked the “Enter Breakout Room” button clicks the visible “Exit Breakout Room” button.</p>	<p>The host who clicked the exit breakout rooms button should see that the user who was in the breakout room back in the same room.</p> <p>The other user should also see the host of the main room again.</p> <p>The host should also see that the “Exit Breakout Room” button is replaced by the “Enter Breakout Room” button.</p>	 <p>The host who clicked the exit breakout rooms button can see that the user who was in the breakout room back in the main room.</p> <p>Host can see the Breakout Rooms button.</p>
Test Help	<p>Tests if application can access the help description correctly.</p> <p>----</p> <p>Preconditions: Terminal is navigated to the root of the repo.</p> <p>Launch the help description by typing ‘npm run help’ in the terminal.</p>	<p>In the terminal, the help messages should be displayed.</p>	 <pre>C:\Users\Meeloy\git\sparkjs>sparkjs --help sparkjs v0.8.8 help node scripts/help.js sparkjs The best hands free web conferencing software in Raleigh, NC. -----Help inside----- Here are some places where to start: - If you need to install needed dependencies with "npm install". - Then, see about running your test cases with "npm run test". - Now you should be able to launch the app with "npm run start" or "nodemon server.js". Just visit your localhost:3000 to find the application and start sharing! ----- visit our online documentation (https://github.com/ntgomes/spark/blob/main/README.md) for more support. C:\Users\Meeloy\git\sparkjs></pre> <p>The help messages are displayed.</p>