

Black Box Test Plan: Spark

Test ID	Description	Expected Results	Actual Results
TestLaunching	<p>Tests if application launched successfully -----</p> <p>Preconditions: Terminal is navigated to the root of the repo.</p> <p>Launch the application by typing 'npm run start' in the terminal.</p> <p>In Google Chrome, open http://localhost:3000</p>	<p>The application should be up and running on http://localhost:3000/</p> <p>User should be able to see controls for joining a room, and other button controls for audio, video, and screen sharing.</p>	<p>The application is up and running on http://localhost:3000/</p> <p>User is able to see controls for joining a room, and other button controls for audio, video, and screen sharing.</p>
TestJoiningRoom	<p>Tests if a user is able to join a room. ---</p> <p>Preconditions: Test Launching successful.</p> <p>In the "choose a room number to enter" box, type '2'.</p>	<p>The user should be prompted to allow the software to use their camera, and the room should open. The user should be able to see their camera being displayed.</p>	<p>The room opens and the camera displaying the user's video is turned on.</p>
TestConnectingWithAnotherUser	<p>Tests if a user is able to connect with another user by joining a room. If user 1 joins Room 2 and user 2 joins Room 2, they should be able to communicate with each other through video and other button controls. ---</p>	<p>Both users should be able to see each other and be able to communicate with each other.</p>	<p>Both users are able to see each other and are able to communicate with each other in room 2.</p>

	<p>Preconditions: TestJoiningRoom successful.</p> <p>In another browser, launch localhost:3000.</p> <p>Enter "2" in the "choose a room number to enter" box.</p>		
TestSoloRoom	<p>Tests if the rooms are truly unique.</p> <p>---</p> <p>Preconditions: TestJoiningRoom successful.</p> <p>In another browser, launch localhost:3000.</p> <p>Enter "1" in the "choose a room number to enter" box.</p>	Both browsers with the application running should be separate, neither browser should be sharing the video with the other participant.	The two running instances of the programs are not sharing any information or video. The rooms the participants have joined are completely separate.
TestJoiningDiffRoom	<p>Tests if a user can be in one room, leave and join another room.</p> <p>---</p> <p>Preconditions: TestSoloRoom completed.</p> <p>In the "choose a room number to enter" box, remove the "1" and type "2". Select enter.</p>	The user should leave room 1 and be in room 2. They should see the other participant in room 2. Both videos in both browsers should be displaying a stream.	The user joins room 2. Both of the videos are on in both rooms.

TestButtonControlForMute	<p>Tests if Mute button for audio control works as expected for muting the microphone.</p> <p>---</p> <p>Preconditions: TestJoiningDiffRoom completed.</p> <p>User 2 should click the "mute" button.</p>	<p>User 1 should no longer be able to hear User's 2 mic.</p> <p>User's 2 browser should say "unmute" where the "mute" button used to be.</p>	<p>User 2's volume button now reads "unmute". No sound being transmitted to User 1.</p>
TestButtonControlForUnmute	<p>Tests if Unmute button for audio control works as expected for unmuting the microphone.</p> <p>---</p> <p>Preconditions: TestButtonControlForMute completed.</p> <p>User 2 should click the "unmute" button.</p>	<p>User 1 should now be able to hear User's 2 mic.</p> <p>User's 2 browser should say "mute" where the "unmute" button used to be.</p>	<p>User 2's volume button now reads "mute". Sound now being transmitted to User 1.</p> <p>Note: it is expected that there may be an echo if you are testing with two local instances on the same computer and not have two different computers connected to a server.</p>
TestButtonControlForCameraOff	<p>Tests if the Camera button for Camera control works as expected for turning the camera off.</p> <p>---</p> <p>Preconditions: TestJoiningDiffRoom completed.</p> <p>User 2 should click the "Hide cam" button.</p>	<p>User 1 should no longer be able to see User's 2 video.</p> <p>User's 2 browser should say "Show cam" where the "Hide cam" button used to be.</p> <p>User 2 should no longer be able to see their own video.</p>	<p>User 2's camera is turned off and their video is not displayed on their own screen. No video is being transmitted to User 1.</p> <p>User 2's camera button now reads "Show cam".</p>

<p>TestButtonControlForCameraOn</p>	<p>Tests if the Camera button for Camera control works as expected for turning the camera back on.</p> <p>---</p> <p>Preconditions: TestButtonControlForCameraOff completed.</p> <p>User 2 should click the "Show cam" button.</p>	<p>User 1 should be able to see User's 2 video.</p> <p>User's 2 browser should say "Hide cam" where the "Show cam" button used to be.</p> <p>User 2 should be able to see their own video.</p>	<p>User 2's camera is turned on and their video is displayed on their own screen. The video is being transmitted to User 1.</p> <p>User 2's camera button now reads "Hide cam".</p>
<p>TestButtonControlForScreenSharing</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: TestJoiningDiffRoom completed.</p> <p>User 1 should click the share screen button.</p>	<p>Screen sharing works as expected when users are connected to the same room.</p>	<p>User 1 is prompted by their browser to allow screen sharing. They should select what they want to share (be it a browser or the whole display).</p> <p>The screen share is shown on User 1's browser.</p> <p>In User 2's browser, User 1's video disappears and is replaced with the screen share.</p>

TestGestureRecognitionForAudio	<p>Tests if gesture recognition (thumbs up/ thumbs down) for audio controls is working correctly.</p> <p>---</p> <p>Preconditions: TestJoiningDiffRoom completed.</p> <p>User 1 should ensure their camera is on.</p> <p>User 1 should use their left hand and make a thumbs up motion to the camera.</p>	<p>When user shows thumbs up/down towards the camera, gestures will be recognized to call audio controls. Thumbs up should unmute the microphone while thumbs down should mute the microphone.</p>	<p>When user shows thumbs up towards the camera, gestures will be recognized as expected. Thumbs up ensures the audio is on.</p>
TestGestureRecognitionForScreenSharing	<p>Tests if gesture recognition (swipe left/ swipe right) for screen sharing controls is working correctly.</p> <p>---</p> <p>Preconditions: TestJoiningDiffRoom completed.</p> <p>User 1 should ensure their camera is on.</p> <p>User 1 should use their index and middle finger of their left hand and swipe toward their right side across the camera view.</p>	<p>When user swipes left/ right towards the camera, gestures will be recognized to call screen sharing controls. Swiping right should enable screen sharing while swiping left should disable screen sharing.</p>	<p>When user swipes right towards the camera, screen share will be enabled.</p> <p>User 1 should be prompted to allow screen sharing and can choose which browser to share.</p>
TestHelp	<p>Tests if application can access the help description correctly.</p> <p>-----</p>	<p>In the terminal, the help message should be displayed</p>	<p>Terminal launches help menu which states...</p>

	<p>Preconditions: Terminal is navigated to the root of the repo.</p> <p>Launch the application by typing 'npm run help' in the terminal.</p>	<p>with information about where additional support can be found.</p>	<p>Welcome to Spark! The best hands free web conferencing software in Raleigh, NC.</p> <p>-----Help Guide----- Here are some places where to start:</p> <p>...(cont)</p>
TestTests	<p>Tests if application can run the tests correctly.</p> <p>-----</p> <p>Preconditions: Terminal is navigated to the root of the repo.</p> <p>Launch the application by typing 'npm run test' in the terminal.</p>	<p>In the terminal, the tests should run and be indicative if they are passing or not.</p> <p>All tests should be passing.</p>	<p>Terminal launches the testing script and runs the tests. All tests are passing.</p>
TestCoverage	<p>Tests if application has high code coverage based on testing scripts.</p> <p>-----</p> <p>Preconditions: Terminal is navigated to the root of the repo.</p> <p>Launch the application by typing 'npm run coverage' in the terminal.</p>	<p>In the terminal, the tests should run and show the code coverage report.</p> <p>Coverage should higher than 80%</p>	<p>Terminal launches the testing coverage script and runs the tests.</p> <p>A coverage report is generated, with a coverage of 85%.</p>