

# **Tug Of Words**

## **Test Plan**

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<b>Identification and Classification</b>	<b>Test Case 001: Create a Private Room</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Crucial</b>  <b>Classification: Functionality Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Open the Tug Of Words home page</li> <li>• Select “private room”</li> <li>• Select “join game”</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• A private game room should be created</li> <li>• No public users should be added to private room, users can only join by invite</li> </ul>

<b>Identification and Classification</b>	<b>Test Case 002: Joining a public game room</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Crucial</b>  <b>Classification: Functionality Test</b>
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<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Open the Tug Of Words home page</li> <li>• Select “join game”</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• User should be entered into a random public game room</li> <li>• User should see other random people join the room as they log on</li> <li>• As public users join, they should be added to one of the two teams</li> </ul>

<b>Identification and Classification</b>	<p><b>Case 003: Join a private game room</b></p> <p><b>System: Tug of Words</b></p> <p><b>Module: Lobby</b></p> <p><b>Severity: Crucial</b></p> <p><b>Classification: Functionality Test</b></p>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Have a friend create a private game room in Tug of Words</li> <li>• Have the friend send you the generated private room URL</li> <li>• Open the generated private room URL in your browser</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• User is added to a private game room that their friend is already in</li> <li>• User selects which team they are added to</li> <li>• No public users can join the game room</li> <li>• Both the user and their friend can add other users by sharing the generated private room URL</li> </ul>

<b>Identification and Classification</b>	<b>Case 004: Automatic team distribution in public rooms</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Important</b>  <b>Classification: Functionality Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Join a public game room</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Once the user successfully joins the game room, they will be added to one of the two teams</li> <li>• There are 3 different cases to be tested: <ul style="list-style-type: none"> <li>○ If the two teams have an equal number of players on them when the user joins, the user will be placed randomly on one of the teams</li> <li>○ If the left team has more players on it than the right team, the user will be placed on the right team</li> <li>○ If the right team has more players on it than the left team, the user will be played on the left team</li> </ul> </li> </ul>

<b>Identification and Classification</b>	<b>Case 005: Earn points for typing a word correctly</b>  <b>System: Tug of Words</b>  <b>Module: Word Check</b>  <b>Severity: Crucial</b>
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	<b>Classification: Functionality Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Join a public/private game room</li> <li>• Begin the game</li> <li>• As words appear on the screen, type some of them correctly</li> <li>• As words appear on the screen, type some of the incorrectly</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Your individual contribution score should be incremented based on the number of people on your team for each word that you type correctly</li> <li>• Your individual contribution score should not increase when you type a word incorrectly</li> <li>• Your individual contribution score should decrease when you type a word incorrectly</li> </ul>

<b>Identification and Classification</b>	<p><b>Case 006: See individual point contributions during game</b></p> <p><b>System: Tug of Words</b></p> <p><b>Module: Scoring</b></p> <p><b>Severity: Important</b></p> <p><b>Classification: Functionality Test</b></p>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Have multiple users join a game</li> <li>• Each user enter some words correctly</li> <li>• Each user enter some words incorrectly</li> </ul>

<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• A leaderboard should be displayed with the top users from each team</li> </ul>
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<b>Identification and Classification</b>	<b>Case 007: See Individual points post-game</b>  <b>System: Tug of Words</b>  <b>Module: Scoring</b>  <b>Severity: Important</b>  <b>Classification: Functionality Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Join a game</li> <li>• Enter some words correctly</li> <li>• Enter some words incorrectly</li> <li>• See score at the end of the game</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Score should be aggregated and displayed in the UI</li> </ul>

<b>Identification and Classification</b>	<b>Case 008: User typing speed statistics</b>  <b>System: Tug of Words</b>  <b>Module: Scoring</b>
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	<b>Severity: Workaround</b>  <b>Classification: Functionality Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Join a game</li> <li>• Type most words correctly</li> <li>• Type some words incorrectly</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• At the end of the game, WPM, CWPM, and Accuracy should be displayed correctly</li> </ul>

<b>Identification and Classification</b>	<b>Case 009: Lose points when typing a word incorrectly</b>  <b>System: Tug of Words</b>  <b>Module: Scoring</b>  <b>Severity: Important</b>  <b>Classification: Functionality Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Join a game</li> <li>• Type some words correctly</li> <li>• Type some words incorrectly</li> </ul>

<b>Expected Result</b>	<ul style="list-style-type: none"> <li>Individual and team points should be decreased each incorrectly typed phrase</li> </ul>
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<b>Identification and Classification</b>	<b>Case 010: Pick a team when joining a private room</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Crucial</b>  <b>Classification: Functionality Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>Join a private room (either by creating one or using a shared link)</li> <li>Choose Team 1 or Team 2</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>If user selects Team 1 they'll be placed into Team 1.</li> <li>If user selects Team 2 they'll be placed into Team 2.</li> </ul>

<b>Identification and Classification</b>	<b>Case 011: Share a link to a private room with friends</b>  <b>System: Tug of Words</b>
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	<b>Module: Lobby</b>  <b>Severity: Important</b>  <b>Classification: Functionality</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Share generated link with friends and make them join your private room.</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• While in room, other users should show up as they join</li> <li>• Person joining the room should go to the waiting lobby of the specific game that was shared in the link.</li> </ul>

<b>Identification and Classification</b>	<b>Case 012: Nickname creation</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Crucial</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Go to Tug of Words homepage</li> <li>• Type in Nickname</li> <li>• Hit play to join a public room or create a private room and continue process.</li> </ul>

<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• If Nickname was entered, that nickname will be in our database as a temporary user.</li> </ul>
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<b>Identification and Classification</b>	<p><b>Case 013: Teams of unequal size in a private room.</b></p> <p><b>System: Tug of Words</b></p> <p><b>Module: Lobby</b></p> <p><b>Severity: Crucial</b></p> <p><b>Classification: Functionality</b></p>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Join a private room (either by creating one or using a shared link)</li> <li>• Choose Team 1 or Team 2</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• When in a private room, a user has the option to choose whichever team they would like to be on.</li> <li>• If user selects Team 1 they'll be placed into Team 1</li> <li>• If user selects Team 2 they'll be placed into Team 2</li> <li>• Therefore, the number of players do not have to be equal between the two teams.</li> </ul>

<b>Identification and Classification</b>	<p><b>Case 014: Game start after two people join a room</b></p> <p><b>System: Tug of Words</b></p>
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	<b>Module: Lobby</b>  <b>Severity: Important</b>  <b>Classifications: Functionality</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create a room</li> <li>• User 1 joins the room</li> <li>• User 2 joins the room</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• When User 1 joins the room the game should not begin</li> <li>• When User 2 joins the room the game should automatically begin</li> </ul>

<b>Identification and Classification</b>	<b>Case 015: Move the rope towards a winning team</b>  <b>System: Tug of Words</b>  <b>Module: Scoring</b>  <b>Severity: Crucial</b>  <b>Classifications: Functionality</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create a room</li> <li>• Start the game</li> <li>• Team 1 types a word correctly while Team 2 remains idle</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Assuming that the room creation and game initialization functions, after the game begins, the rope should move towards team 1's side.</li> </ul>

<b>Identification and Classification</b>	<b>Case 016: Move rope away due to mistakes</b>  <b>System: Tug of Words</b>
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	<b>Module: Scoring</b>  <b>Severity: Important</b>  <b>Classification: Functionality</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create a room</li> <li>• Start the game</li> <li>• Team 1 types a word incorrectly while Team 2 remains idle</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Assuming that the room creation and game initialization functions, after the game begins, the rope should move away from team 1's side.</li> </ul>

<b>Identification and Classification</b>	<b>Case 017: Sufficiently randomized words during game play</b>  <b>System: Tug of Words</b>  <b>Module: Word Gen</b>  <b>Severity: Important</b>  <b>Classification: Functionality</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Start a game</li> <li>• Correctly type a word</li> <li>• Incorrectly type a word</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• When the correct word is typed, a new random word should be generated</li> <li>• When an incorrect word is typed, a new random word should be generated</li> </ul>

<b>Identification and Classification</b>	<b>Case 018: Hot bonuses for streaks in game</b>  <b>System: Tug of Words</b>  <b>Module: Scoring</b>  <b>Severity: Work around</b>  <b>Classification: Functionality</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Start a game</li> <li>• Correctly type a word</li> <li>• Repeat above</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• After a minimum of 5 words is typed without error, a multiplier is added to the score each word contributes to the game</li> <li>• A Visual symbol is displayed to make the user aware of the status of the streak</li> <li>• As the streak of correct words grows larger, the multiplier grows as well</li> <li>• After a certain streak, the bonus multiplier is capped and does not increase anymore</li> </ul>

<b>Identification and Classification</b>	<b>Case 019: Access via internet (deployment)</b>  <b>System: Tug of Words</b>  <b>Module: Deployment</b>  <b>Severity: Important</b>  <b>Classification: Functional</b>
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<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Type the public url for Tug Of Words into your browser</li> <li>• &lt;enter&gt;</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• The create/join game menu renders to the screen</li> <li>• The user is able to interact with the application from this link</li> </ul>

<b>Identification and Classification</b>	<p><b>Case 020: Words displayed on enemy screen</b></p> <p><b>System: Tug of Words</b></p> <p><b>Module: In-Game</b></p> <p><b>Severity: Workaround</b></p> <p><b>Classification: Functionality Test</b></p>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create or join a game</li> <li>• Make sure someone is on the opposite team</li> <li>• As they type words, watch the interface for words that they have typed correctly</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• As the opponent types correct words, they appear on my screen</li> </ul>

<b>Identification and Classification</b>	<b>Case 021: Boundary Test for Nickname Creation</b>  <b>System: Tug of Words</b>  <b>Module:</b>  <b>Severity: Crucial</b>  <b>Classification: Boundary Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Go to Tug of Words homepage</li> <li>• Type in a really long Nickname</li> <li>• Hit play to join a public room or create a private room and continue process.</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• If Nickname was entered, that nickname will be in our database as a temporary user.</li> <li>• Shows that length of Nickname does not matter.</li> </ul>

<b>Identification and Classification</b>	<b>Case 022: Boundary Test for Nickname Creation - Special Characters</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Crucial</b>  <b>Classification: Boundary</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Go to Tug of Words homepage</li> <li>• Type in a nickname with invalid characters</li> <li>• Hit play to join a public room or create a private room and continue process.</li> </ul>

<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• If an invalid Nickname was entered, it must throw an error</li> <li>• Ask for the user to enter a valid nickname.</li> </ul>
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<b>Identification and Classification</b>	<b>Case 023: Boundary Test for Nickname Creation - No Name</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Crucial</b>  <b>Classification: Boundary</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Go to Tug of Words homepage</li> <li>• No nickname</li> <li>• Hit play to join a public room or create a private room and continue process.</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• If an invalid Nickname was entered, it must throw an error</li> <li>• Ask for the user to enter a valid nickname.</li> </ul>

<b>Identification and Classification</b>	<b>Case 024: Game start after two people join a room</b>  <b>System: Tug of Words</b>
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	<b>Module: Lobby</b>  <b>Severity: Important</b>  <b>Classifications: Equivalence Class</b>
<b>Instructions</b>	Equivalence Class: 0, 1, 2, 3 to infinity <ul style="list-style-type: none"> <li>• Start a game</li> <li>• x number of users join the lobby, depending on the equivalence class.</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Game should not begin if there are 0 or 1 user in the lobby</li> <li>• Game should begin when 2 players join the room regardless of how many enter afterwards</li> </ul>

<b>Identification and Classification</b>	<b>Case 025: Teams of equal size in a public room.</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Crucial</b>  <b>Classification: Functionality</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Go to Tug of Words homepage</li> <li>• Enter nickname</li> <li>• Hit play</li> <li>• Placed in team</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• If Team 1 had less people, user would get placed in Team 1</li> <li>• If Team 2 had less people, user would get placed in Team 2</li> <li>• If the two teams are of equal size, user would get placed into a random team.</li> </ul>

<b>Identification and Classification</b>	<b>Case 026: Move the rope towards a winning team</b>  <b>System: Tug of Words</b>  <b>Module: Scoring</b>  <b>Severity: Important</b>  <b>Classifications: Boundary Value</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create a room</li> <li>• Start the game</li> <li>• Team 1 types arbitrary large number of words correctly while Team 2 remains idle</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Assuming that the room creation and game initialization functions, after the game begins, the rope should move towards team 1's side at a rapid pace, resulting in an almost instant team 1 victory.</li> </ul>

<b>Identification and Classification</b>	<b>Case 027: Move rope away due to mistakes</b>  <b>System: Tug of Words</b>  <b>Module: Scoring</b>  <b>Severity: Important</b>  <b>Classification: Boundary Value</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create a room</li> <li>• Start the game</li> <li>• Team 1 types arbitrary large number of words incorrectly while Team 2 remains idle</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Assuming that the room creation and game initialization functions, after the game begins, the rope should move away from team 1's side at a rapid</li> </ul>

	pace, resulting in an almost instant team 2 victory.
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<b>Identification and Classification</b>	<b>Case 028: Sufficiently randomized words during game play</b>  <b>System: Tug of Words</b>  <b>Module: Word Gen</b>  <b>Severity: Important</b>  <b>Classification: Boundary Value</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Start a game</li> <li>• Correctly type arbitrary large number of words</li> <li>• Incorrectly type arbitrary large number of words</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• Every time a correct word is typed, a new random word should be generated</li> <li>• Every time an incorrect word is typed, a new random word should be generated</li> <li>• Each word generated after a correctly typed word should have similar distribution</li> <li>• Each word generated after a incorrectly typed word should have similar distribution</li> <li>• All generated words should have similar distribution</li> </ul>

<b>Identification and Classification</b>	<b>Test Case 029: Create a Private Room Boundary</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Important</b>  <b>Classification: Boundary Test</b>
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<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Open the Tug Of Words home page</li> <li>• Select “private room”</li> <li>• Select “join game”</li> <li>• Repeat many times, until there are many private rooms created</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• All private game rooms should be created successfully</li> <li>• The large number of private rooms should not cause any errors for any of the rooms</li> </ul>

<b>Identification and Classification</b>	<p><b>Test Case 030: Create a Private Room Equivalence Test</b></p> <p><b>System: Tug of Words</b></p> <p><b>Module: Lobby</b></p> <p><b>Severity: Important</b></p> <p><b>Classification: Equivalence Test</b></p>
<b>Instructions</b>	<p>Equivalence Classes: 0-10, 10-50, 50-infinity</p> <ul style="list-style-type: none"> <li>• Open the Tug Of Words home page</li> <li>• Select “private room”</li> <li>• Select “join game”</li> <li>• Repeat many times, until there are many private rooms created</li> </ul>

<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• All private game rooms should be created successfully</li> <li>• The large number of private rooms should not cause any errors for any of the rooms or gameplay for any of the users</li> </ul>
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<b>Identification and Classification</b>	<b>Test Case 031: Joining a public game room Boundary Test</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Important</b>  <b>Classification: Boundary Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Open the Tug Of Words home page</li> <li>• Select “join game”</li> <li>• Repeat this process enough times to generate a large amount of public game rooms concurrently</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• All public game rooms should be created successfully</li> <li>• The large number of public rooms should not cause any errors for any of the rooms or gameplay for any of the users</li> </ul>

<b>Identification and Classification</b>	<b>Test Case 032: Joining a public game room Equivalence Test</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>
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	<b>Severity: Important</b>  <b>Classification: Equivalence Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Open the Tug Of Words home page</li> <li>• Select “join game”</li> </ul>
<b>Expected Result</b>	Equivalence Classes: 0-10, 10-50, 50-infinity <ul style="list-style-type: none"> <li>• User should be entered into a random public game room</li> <li>• User should see other random people join the room as they log on</li> <li>• As public users join, they should be added to one of the two teams</li> </ul>

<b>Identification and Classification</b>	<b>Case 033: Team distribution in private rooms Boundary Test</b>  <b>System: Tug of Words</b>  <b>Module: Lobby</b>  <b>Severity: Workaround</b>  <b>Classification: Boundary Test</b>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create a private room</li> <li>• Add a large number of people to the private room via the generated URL</li> </ul>

<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• There should be a size limit of 20 for each team in a game room. This would mean that the total size of the game room is 40. Once there are 40 members in a game room, there should be exactly 20 people on each team.</li> <li>• If any additional users try to join the game room, they will be redirected to a page that effectively says “Sorry, this lobby is full”</li> <li>• If any team already has 20 people on it, new users should only be able to be added to the other team</li> </ul>
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<b>Identification and Classification</b>	<p><b>Case 034: Team distribution in public rooms Boundary Test</b></p> <p><b>System: Tug of Words</b></p> <p><b>Module: Lobby</b></p> <p><b>Severity: Workaround</b></p> <p><b>Classification: Boundary Test</b></p>
<b>Instructions</b>	<ul style="list-style-type: none"> <li>• Create a private room</li> <li>• Add a large number of people to the private room via the generated URL</li> </ul>
<b>Expected Result</b>	<ul style="list-style-type: none"> <li>• There should be a size limit of 20 for each team in a game room. This would mean that the total size of the game room is 40. Once there are 40 members in a game room, there should be exactly 20 people on each team.</li> <li>• If any additional users try to join the game room, they will be redirected to a page that effectively says “Sorry, this lobby is full”</li> </ul>