

# Tower Dream

## Test Plan

<b>Identification and classification</b>	<b>Test Case 001 - Valid UserName</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Attempt to login without creating an account first</b>
<b>Expected result</b>	This should not allow the user to login, but prompt them to register.

<b>Identification and classification</b>	<b>Test Case 002 - Valid password</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Attempt to login with an incorrect password</b>
<b>Expected result</b>	This should not allow the user to login, but prompt them to enter a different password.

<b>Identification and classification</b>	<b>Test Case 003 - Blank Login</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Attempt to login with nothing input into the username and password fields.</b>
<b>Expected result</b>	This should not allow the user to login, but prompt them to input valid username and password.

<b>Identification and classification</b>	<b>Test Case 004 - Register Valid</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<ol style="list-style-type: none"><li>1.) Attempt to register with a alphanumeric username in the length range of 1-50 characters.</li><li>2.) Attempt to register with a alphanumeric username in the length range of 51-100 characters.</li><li>3.) Attempt to register with a alphanumeric username in the length range of &gt; 100 characters.</li></ol>

<b>Expected result</b>	This should allow the user to register.
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<b>Identification and classification</b>	<b>Test Case 005 - Register Invalid</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Attempt to register with a taken username</b>
<b>Expected result</b>	This should tell the user that the username is taken.

<b>Identification and classification</b>	<b>Test Case 006 - Main Menu Quit Button</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Click the quit button in the level select menu</b>
<b>Expected result</b>	This should quit the game.

<b>Identification and classification</b>	<b>Test Case 007 - Level 1</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Click the level 1 button</b>
<b>Expected result</b>	This should take the user to level 1.

<b>Identification and classification</b>	<b>Test Case 008 - Level 2</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Click the level 2 button</b>
<b>Expected result</b>	This should take the user to level 2.

<b>Identification and classification</b>	<b>Test Case 009 - Pause Menu</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Hit the escape key at various points in the game</b>
<b>Expected result</b>	This should bring up the pause menu and pause the game.

<b>Identification and classification</b>	<b>Test Case 010 - Resume</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	Click the resume button.
<b>Expected result</b>	This should take away the pause menu and resume the game.

<b>Identification and classification</b>	<b>Test Case 011 - Help button</b> <b>Severity: 3 (Work-Around)</b>
<b>Instructions</b>	Click the help button.
<b>Expected result</b>	This should bring up a help menu that gives the controls for the game.

<b>Identification and classification</b>	<b>Test Case 012 - Menu button</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	Click the menu button
<b>Expected result</b>	This should bring the user back to the level select menu.

<b>Identification and classification</b>	<b>Test Case 013 - Movement</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	Use WASD to move the character around
<b>Expected result</b>	The character should move in the appropriate direction and should be able to move throughout the map.

<b>Identification and classification</b>	<b>Test Case 014 - Pause menu quit button</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	Click the quit button from the pause game menu
<b>Expected result</b>	This should quit the user from the current level that they are using.

<b>Identification and classification</b>	<b>Test Case 015 - Abilities</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Use the correct keys to use either ability</b>
<b>Expected result</b>	The rock ability should hit a random enemy, deal damage, and follow a 12 second cooldown. The explosion ability should deal AOE damage and follow a 75 second cooldown.

<b>Identification and classification</b>	<b>Test Case 016 - Selecting and building towers</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Select a tower to build and press B to build it</b>
<b>Expected result</b>	The selected tower should be indicated by a red bar in the UI. The tower should be built if the player is in a light green area, but not in a yellow area.

<b>Identification and classification</b>	<b>Test Case 017 - Displays for level</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Start level 1 or 2 and check to see the level displayed in the top left.</b>
<b>Expected result</b>	This should make sure that the level is displayed correctly in the top left for the level that you have selected.

<b>Identification and classification</b>	<b>Test Case 018 - Display for waves</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Go into either level 1 or level 2 and check the top left to see the waves</b>
<b>Expected result</b>	This should show the current wave that you are on.

<b>Identification and classification</b>	<b>Test Case 019 - Dealing basic attack damage</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Press the left mouse button to deal attack damage</b>
<b>Expected result</b>	When aiming at an enemy, damage should be dealt to them and the health should be displayed. Decreasing when you hit them.

<b>Identification and classification</b>	<b>Test Case 020 - Displaying the time</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Go into either level 1 or level 2 and check the top left to see the time</b>
<b>Expected result</b>	This should show the current time left in the round and count down.

<b>Identification and classification</b>	<b>Test Case 021 - Displaying the enemies left</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Go into either level 1 or level 2 and check the top left to see the enemies left</b>
<b>Expected result</b>	This should show the current amount of enemies left for the current wave, and it should go down when an enemy is killed.

<b>Identification and classification</b>	<b>Test Case 022 - Pressing the P key</b> <b>Severity: 3 (Workaround)</b>
<b>Instructions</b>	<b>Open up level 1 or level 2 and press the p key</b>
<b>Expected result</b>	This should give the user more gold, and will update the display for gold on the top of the screen.

<b>Identification and classification</b>	<b>Test Case 023 - Walking off the map</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Open up level 1 or level 2 and attempt to walk off of the map</b>
<b>Expected result</b>	This should result in stopping the user from moving too far, creating a boundary.

<b>Identification and classification</b>	<b>Test Case 024 - Lose the game</b> <b>Severity: 1 (Critical)</b>
<b>Instructions</b>	<b>Go into either level 1 or level 2 and then lose the game</b>
<b>Expected result</b>	A banner should be displayed showing that you lost the game.

<b>Identification and classification</b>	<b>Test Case 025 - Win the game</b> <b>Severity: 3 (Workaround)</b>
<b>Instructions</b>	<b>Go into either level 1 or level 2 and then win the game</b>
<b>Expected result</b>	A banner should be displayed showing that you won the game.

<b>Identification and classification</b>	<b>Test Case 026 - Building towers on top of eachother</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Try to build a tower on top of another.</b>
<b>Expected result</b>	The second tower should be built on the nearest tile.

<b>Identification and classification</b>	<b>Test Case 027 - Selling Towers</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Click on the sell button, then left click a tower.</b>
<b>Expected result</b>	The tower should be sold, and you should get some money back.

<b>Identification and classification</b>	<b>Test Case 028 - Boss monsters spawn</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Wait until a boss monster spawns</b>
<b>Expected result</b>	A bigger monster should spawn that has more health, and gives more gold, but it should otherwise behave normally.

<b>Identification and classification</b>	<b>Test Case 029 - Display lives left</b> <b>Severity: 2 (Important)</b>
<b>Instructions</b>	1.) Play the game and lose 1-10 lives 2.) Play the game and lose 11-24 lives 3.) Play the game and lose 25 lives
<b>Expected result</b>	The life count should be decremented correctly for each life lost when mobs pass through the map.

<b>Identification and classification</b>	<b>Test Case 030- Upgrade Towers</b> <b>Severity: 2 (Critical)</b>
<b>Instructions</b>	<b>Left click on a tower</b>
<b>Expected result</b>	The tower should be upgraded and 'Upgraded' should appear in the notification area.

<b>Identification and classification</b>	<b>Test Case 031 - Register Invalid Username/Password</b> <b>Severity:</b>
<b>Instructions</b>	<b>Attempt to register with a username that contains non-alphanumeric username and/or password</b>
<b>Expected result</b>	The user should not be allowed to register.

<b>Identification and classification</b>	<b>Test Case 032 - Login Invalid Username/Password Severity:</b>
<b>Instructions</b>	<b>Attempt to log in with a non-alphanumeric username and/or password</b>
<b>Expected result</b>	The user should not be allowed to log in.

<b>Identification and classification</b>	<b>Test Case 033 - Gold upon defeating an enemy Severity: 2 (Important)</b>
<b>Instructions</b>	<b>Defeat an enemy</b>
<b>Expected result</b>	The gold balance should increase.

<b>Identification and classification</b>	<b>Test Case 034 - Moving the camera freely Severity:</b>
<b>Instructions</b>	<b>Get into either level 1 or level 2 and try to use the camera to freely move around</b>
<b>Expected result</b>	Using the mouse should change the perspective of the for the user, this will cycle around the character that the user is controlling and give them different viewpoints.