

| Test Case ID | 🔗 Test Type | Test Scenario | Test Case | Pre Conditions | Test Step | Input Data | Expected Result | Actual Results | 🔗 Pass/Fail |
|--------------|--------------------|-----------------------------------|--|---|--|------------------|--|---|-------------|
| Example | Expected | Add Item Button Functionality | Check output of item on treeview proceeded by button press | Entry widget must have a input | 1. Open Window 2. Navigate to interactive widgets 3. Input a task that would like to be completed in entry 4. Press the Add Item Button | - Do the laundry | Display "Do the laundry" in the treeview widget | Displayed the "Do the laundry" task in the treeview widget | Pass |
| 1 | Expected | Game Button Widget Stylisation | Check if button inherited new background colour | Initiate programme | 1. Open Window | (Nil) | Change background colour to red | Did not execute style | Fail |
| 2 | Expected | Game Button Widget Stylisation | Check if button inherited new font | Initiate programme | 1. Open Window | (Nil) | Change button font to Comic Sans | No change to X character | Fail |
| 3 | Expected | Game Button Widget Stylisation | Check if button changed to the appropriate box shape | Initiate programme | 1. Open Window | (Nil) | Change background colour to red | Successfully changed size into a box rather than a rectangle | Pass |
| 4 | Expected | Game Button Widget Stylisation | Check if button stops applying offset when pressed | Initiate programme | 1. Open Window | Press Button | Does not apply an automatic offset to the bottom right corner | Failed to maintain character in the center of the button widget | Fail |
| 5 | Expected | Game Button Widget Stylisation | Check if new creation of button is the correct size | Initiate programme | 1. Open Window | (Nil) | The button will be a square shape | The button managed to follow the anticipated sizing | Pass |
| 6 | Expected | Game Button Widget Stylisation | Check if button inherits new X design | Initiate programme | 1. Open Window | (Nil) | The button shows what it would look like if it was pressed during the players turn | The button properly inherited the new x icon | Pass |
| 7 | Expected | Game Button Widget Stylisation | Check if button changes colour when pressed | Initiate programme | 1. Open Window | Press Button | The button will change to a red colour based on the blueprint | Failed to show colour since it is deactivated | Fail |
| 8 | Expected | Game Button Widget Stylisation | Check if button will change the styles in the 3x3 grid | Initiate programme | 1. Open Window | (Nil) | The buttons in the game grid will change based on the new style | Changed all styles of the buttons appropriately | Pass |
| 9 | Expected | Game Button Widget Stylisation | Check if the button inherits new O design with colour blue | Initiate programme | 1. Open Window | Press Button | Button will change to o and become blue when pressed | Failed to change the colour of button but instead red due to style | Fail |
| 10 | Expected | Restart Button Widget Stylisation | Check if button changes font appropriately | Initiate programme | 1. Open Window | (Nil) | Button will inherit new font from new style | Displayed new font style | Pass |
| 11 | Expected | Score Labels Stylisation | Check if crosses label changes colour background | Initiate programme | 1. Open Window | (Nil) | Label will inherit new colour red being crosses | Successfully displayed new design of label | Pass |
| 12 | Expected, Boundary | Score Label | Check if score resets on restart button press | Crosses, Tie or Circles must have atleast 1 score | 1. Open Window 2. Play game till player has atleast 1 point | Press Button | Label will reset to zero | Successfully changed value to zero | Pass |
| 13 | Expected | Game Animations | Check if game will showcase how the game has won | Crosses or Circles are about to win the game | 1. Open Window 2. Play game till player has atleast 1 point | Press Button | Game will wait a few seconds showcasing the game of the board then reset the game | Failed to showcase all moves made by players | Fail |
| 14 | Expected | Game Animations | Check if game will showcase green win indicator for 'x's | Crosses are about to win the game | 1. Open Window 2. Play game till player has atleast 1 point | Press Button | X's will change their style to green then reset game | Failed ot reset game | Fail |
| 15 | Expected | Code Reorganisation | Check if new main window would create | Initiate Programme | 1. Open Window | (Nil) | Change a new window to the main window of the programme | Successfully transfered parent as the new main window instead of game | Pass |

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| 16 | Expected | Code Reorganisation | Check that new button created on main window would open game window | Initiate Programme | 1. Open Window 2. Press Open Game Button | Press Button | Open Game Window loading all widgets on the game window with a playable programme | Failed to play game | Fail |
| 17 | Expected | Code Reorganisation | Check that back button returns to the main menu | Game Programme is opened | 1. Open Window 2. Press Open Game Button 3. Press Back Button | Press Button | When the back button is pressed the game window should close opening the main menu | Successfully opened main menu | Pass |
| 18 | Expected | Main Menu | Check that buttons (PVP, PVE, Scoreboard and tutorial would successfully display) | Initiate Programme | 1. Open Window | (Nil) | Buttons display on the main menu tkinter programme | Successfully displayed button widgets | Pass |
| 19 | Expected | Main Menu | Check that buttons (PVP, PVE, Scoreboard and tutorial inherit made themes | Initiate Programme | 1. Open Window | (Nil) | Buttons would inherit styles that were created in separate class | Successfully displayed styles | Pass |
| 20 | Expected | Main Menu | Check that title label is placed on the left side of the tkinter window | Initiate Programme | 1. Open Window | (Nil) | Title will initiate with custom font with appropriate sizing and text wrapping to match drawio blueprint | Successfully displayed title appropriately | Pass |
| 21 | Expected | Main Menu | Check output of tutorial button widget | Initiate Programme | 1. Open Window 2. Press Tutorial Button | Press Button | Button will open popup displaying the rules of the game | Successfully displayed rules | Pass |
| 22 | Expected | Main Menu | Check output of score button widget | Initiate Programme | 1. Open Window 2. Press Scoreboard Button | Press Button | Button will open new popup and display the retrolike style template for highscores concerning player vs ai | Successfully displayed highscore samples | Pass |
| 23 | Expected | Score Popup | Check out of treeview styling | Initiate Programme | 1. Open Window 2. Press Scoreboard Button | Press Button | Widget Interface will have updated to new stylised design | Failed to inherit new design | Fail |
| 24 | Expected | Score Popup | Check if button is placed below treeview widget | Initiate Programme | 1. Open Window 2. Press Scoreboard Button | Press Button | Widget will be placed via grid function underneath the treeview widget | Successfully placed widget | Pass |
| 25 | Expected | Game AI | Check that AI makes a move right after player | Game Opened | 1. Open Window 2. Open Game Window 3. Make a move via button press | Press Button | AI opposition will randomly pick a random available square | Failed to choose free tiles on the game space | Fail |
| 26 | Expected | Game AI | Check ai tie condition | Game Opened | 1. Open Window 2. Open Game Window 3. Make a move via button press | Press Button | Game will reset when both player and ai have no available moves | Failed to proceed to another new game | Fail |
| 27 | Expected | Game AI | Check ai win condition | Game Opened | 1. Open Window 2. Open Game Window 3. Make a move via button press | Press Button | Game will reset in favour of ai | Game Reset | Pass |
| 28 | Expected | Game AI | Check that ai score increases when won | Game Opened | 1. Open Window 2. Open Game Window 3. Make a move via button press | Press Button | Score will increase by one on the top right | AI gained one point displayed by score label | Pass |
| 29 | Expected | Game AI | Check that ai doesn't make another turn if player has already won | Game Opened | 1. Open Window 2. Open Game Window 3. Make a move via button press | Press Button | Game will reset to new game | Failed to start new game without ai making another move | Fail |

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| 30 | Expected | ScoreBoard | Check if new font is initialised onto treeview widget | ScoreBoard Opened | 1. Open Window 2. Open ScoreBoard | Press Button | Font will change the local font of other widgets | Successfully changed design | Pass |
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