# Test Case

### Test Case 1

|  |  |
| --- | --- |
| Purpose | Test that user can play against AI |
| Preconditions | User already has a profile in the game |
| Test Data | public void OnePlayerBtn() |
| Steps | 1. On main menu the user picks “1 Player” choice.  2. The game shows the difficulty screen, select any.  3. The game shows the login screen, login  4. The game shows the select piece screen, pick any piece and AI goes second and press play  5. Pick any cell and place game piece.  6. Wait for AI to make its move  7. Repeat steps 5 and 6 until game is over |
| Actual Result | The user was able to play against AI |
| Pass/Fail | Pass |

### Test Case 2

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| --- | --- |
| Purpose | Test that user can play against another human |
| Preconditions | Both users already have profiles in the game |
| Test Data | public void TwoPlayerBtn() |
| Steps | 1. On main menu the user picks “2 Player” choice.  2. The game shows the login screen for player 1, player 1 logs in  3. The game shows the login screen for player 2, player 2 logs in  4. The game shows the select piece screen, users can decide on game piece and player 1 goes first.  5. press play  6. Player 1 picks any cell and places game piece.  7. Player 2 picks any cell and place game piece.  8. Repeat steps 6 and 7 until game is over |
| Actual Result | Both users were able to play against each other |
| Pass/Fail | Pass |

### Test Case 3

|  |  |
| --- | --- |
| Purpose | Login with existing username |
| Preconditions | 2 Player was chosen in main menu  Both user have existing profiles |
| Test Data | UsernameA = Andrew  UsernameB = Tommy |
| Steps | 1.UserA picks a profile from the list  2.presses next  3.UserB picks a profile from the list  4.presses next  5.Users decide who goes first and what piece to play.  6. Player 1 picks any cell and places game piece.  7. Player 2 picks any cell and place game piece.  8. Repeat steps 6 and 7 until game is over  9. In main menu pick Match History UserA picks their user name to make sure there was an update after match |
| Actual Result | NOT TESTED |
| Pass/Fail | NOT TESTED |

### Test Case 4

|  |  |
| --- | --- |
| Purpose | Login with new usernames |
| Preconditions | 2 Player was chosen in main menu  Both players are new to game |
| Test Data | uesrnameA = Andrew  usernameB = tommy |
| Steps | 1.UserA enters new username  2.presses next  3.UserB enters new username  4.presses next  5.Users decide who goes first and what piece to play.  6. Player 1 picks any cell and places game piece.  7. Player 2 picks any cell and place game piece.  8. Repeat steps 6 and 7 until game is over  9. In main menu pick Match History UserA picks their user name to make sure there was an update after match |
| Actual Result | Both users entered their names and the game saved it. |
| Pass/Fail | Pass |

### Test Case 5

|  |  |
| --- | --- |
| Purpose | Make sure player setting are keep in the gameplay |
| Preconditions | 1 player option was chosen  User has existing profile  AI difficulty was set |
| Test Data | myPlayerSettings = player 1;  myPieceSettings = X; |
| Steps | 1.User picks to go first  2.User picks X as their game piece  3. presses play  4. picks cell and the drops X game piece  5. AI picks cells and drops O game piece  6.Repeat steps 4 and 5 until game is over |
| Actual Results | User played first and X piece drop in desired cell  AI played and dropped the O piece in the desired cell.  Repeated until game was over |
| Pass/Fail | Pass |

### Test Case 6

|  |  |
| --- | --- |
| Purpose | Make sure there is a victory or draw at the end of a game |
| Preconditions | 1 player option was chosen  User has existing profile  AI difficulty was set  Player setting were set |
| Test Data | WhoSolvedGameBoard |
| Steps | 1.User picks a cell  2.AI picks a cell  3.Repeat steps 1 and 2 until game is over  4. Display winner or draw |
| Actual Results | After having 4 pieces in a row game did not display victory message. |
| Pass/Fail | Fail.  Went back and fixed the logic that checks for victory |

### Test Case 7

|  |  |
| --- | --- |
| Purpose | Make sure there is a victory or draw at the end of a game |
| Preconditions | 1 player option was chosen  User has existing profile  AI difficulty was set  Player setting were set |
| Test Data | WhoSolvedGameBoard |
| Steps | 1.User picks a cell  2.AI picks a cell  3.Repeat steps 1 and 2 until game is over  4. Display winner or draw |
| Actual Results | After the whole board was filled no message was display |
| Pass/Fail | Fail.  Went back and fixed the logic that checks for victory |

**Test Case 8**

|  |  |
| --- | --- |
| Purpose | Be able to place piece on empty cell |
| Preconditions | 1 player option was chosen  User has existing profile  AI difficulty was set  Player setting were set |
| Test Data |  |
| Steps | 1.User clicks on empty cell and game piece drops on cell |
| Actual Results | Click on desired cell and game piece landed on cell |
| Pass/Fail | Pass |

**Test Case 9**

|  |  |
| --- | --- |
| Purpose | See user profile and game record |
| Preconditions | There is one existing profile |
| Test Data | Playerproile [] |
| Steps | 1.User clicks match history in main menu  2. Pick their username from list  3. Game displays the game record for profile chosen |
| Actual Results | Clicked on desired profile and was able to see the game record. |
| Pass/Fail | Pass |

**Test Case 10**

|  |  |
| --- | --- |
| Purpose | Be able to use the quit button in main menu to close game |
| Preconditions | Game is open |
| Test Data | Quit() |
| Steps | 1.User opens game  2.User clicks on “Quit” button in main menu to close gmae |
| Actual Results | Clicked on “Quit” and game closed |
| Pass/Fail | Pass |

**Test Case 11**

|  |  |
| --- | --- |
| Purpose | “Easy” button sets up AI to easy |
| Preconditions | User choose “1 Player”, Easy”, username, the game piece and who goes first. |
| Test Data | PlacePieceEasy() |
| Steps | 1.User places piece in cell and waits for AI response.  2.AI places piece in cell.  3.Repeat steps 1 and 2 until game is done. |
| Actual Results | AI was easy to beat. |
| Pass/Fail | Pass |

**Test Case 12**

|  |  |
| --- | --- |
| Purpose | “Medium” button sets up AI to medium |
| Preconditions | User choose “1 Player”, Medium”, username, the game piece and who goes first. |
| Test Data | PlacePieceMedium() |
| Steps | 1.User places piece in cell and waits for AI response.  2.AI places piece in cell.  3.Repeat steps 1 and 2 until game is done. |
| Actual Results | AI was not placing random pieces like easy. |
| Pass/Fail | Pass |

**Test Case 13**

|  |  |
| --- | --- |
| Purpose | “Hard” button sets up AI to hard |
| Preconditions | User choose “1 Player”, Hard”, username, the game piece and who goes first. |
| Test Data | PlacePieceHard() |
| Steps | 1.User places piece in cell and waits for AI response.  2.AI places piece in cell.  3.Repeat steps 1 and 2 until game is done. |
| Actual Results | It was difficult to beat AI, sometimes it ended in a draw, and some losing against it. |
| Pass/Fail | Pass |

**Test Case 14**

|  |  |
| --- | --- |
| Purpose | “Back” button in select difficulty screen to take user back to main menu |
| Preconditions | User choose “1 Player” |
| Test Data | backButton() |
| Steps | 1.User clicks on back button. |
| Actual Results | User is taken to back to Main Menu |
| Pass/Fail | Pass |

**Test Case 15**

|  |  |
| --- | --- |
| Purpose | “Back” button in select user name screen takes user back to select difficulty screen |
| Preconditions | User choose “1 Player”, Easy”. |
| Test Data | backButton() |
| Steps | 1.User clicks on back button |
| Actual Results | User was taken back to select difficulty screen |
| Pass/Fail | Pass |

**Test Case 16**

|  |  |
| --- | --- |
| Purpose | Press “Play” without picking username. Game waits |
| Preconditions | User choose “1 Player”, Easy”. |
| Test Data |  |
| Steps | 1.User presses play without selecting username. |
| Actual Results | Game waits for user to pick username |
| Pass/Fail | Pass |

**Test Case 17**

|  |  |
| --- | --- |
| Purpose | Press “Play” after picking username to take user to player setting screen |
| Preconditions | User choose “1 Player”, Easy” and username |
| Test Data | playButton() |
| Steps | 1.User clicks on “Play” button |
| Actual Results | User was taken to select player setting screen |
| Pass/Fail | Pass |

**Test Case 18**

|  |  |
| --- | --- |
| Purpose | “Back” button in select user name without picking user names to take user back to main menu |
| Preconditions | User choose “2 Player” |
| Test Data | backButton() |
| Steps | 1.User clicks on back button |
| Actual Results | Users were taken back to select difficulty screen |
| Pass/Fail | Pass |

**Test Case 19**

|  |  |
| --- | --- |
| Purpose | “Back” button in select user name when 1st user picked username. Keeps user in current screen and lets 1st user pick again. |
| Preconditions | User choose “2 Player”, and username |
| Test Data | backButton() |
| Steps | 1.User clicks on back button.  2.User clicks on different username. |
| Actual Results | Game let 1st user pick another username |
| Pass/Fail | Pass |

**Test Case 20**

|  |  |
| --- | --- |
| Purpose | Press BACK BUTTON on SELECT USER NAME after SECOND user picked username. Keep users in current screen and let FIRST and SECOND user pick username again |
| Preconditions | User choose “2 Player”, both users picked their usernames |
| Test Data | backButton() |
| Steps | 1.User clicks on back button.  2.1st User clicks on different username.  3.2nd user clicks on different or same username. |
| Actual Results | Game let both user pick their usernames again |
| Pass/Fail | Pass |

**Test Case 21**

|  |  |
| --- | --- |
| Purpose | Press BACK BUTTON TWICE on SELECT USER NAME after SECOND user picked username. Take users back to MAIN MENU. |
| Preconditions | User choose “2 Player”, both users picked their usernames |
| Test Data | backButton() |
| Steps | 1.User clicks on back button twice. |
| Actual Results | Game takes users back to main menu |
| Pass/Fail | Pass |
| Purpose | 1st User presses PLAY button after selecting username. Game waits. |
| Preconditions | User choose “2 Player” |
| Test Data | playButton() |
| Steps | 1.1st User clicks on “Play” button |
| Actual Results | Game waits for 2nd User to pick user name |
| Pass/Fail | Pass |

**Test Case 22**

|  |  |
| --- | --- |
| Purpose | 1st and 2nd select user names and press PLAY button. Takes users to PLAYER SETTING screen. |
| Preconditions | User choose “2 Player”, both users picked their usernames |
| Test Data | playButton() |
| Steps | 1.User clicks on play button |
| Actual Results | Game takes user to player setting screen |
| Pass/Fail | Pass |

**Test Case 23**

|  |  |
| --- | --- |
| Purpose | Press BACK BUTTON in PLAYER SETTING SCREEN to take user back to SELECT USER NAME screen. |
| Preconditions | User choose “2 Player”, both users picked their usernames |
| Test Data | backButton() |
| Steps | 1.User clicks on back button |
| Actual Results | Game takes user to select user name screen |
| Pass/Fail | Pass |

**Test Case 24**

|  |  |
| --- | --- |
| Purpose | Press BACK BUTTON in PLAYER SETTING SCREEN after picking all possible combinations, to take user back to SELECT USER NAME screen. |
| Preconditions | User choose “2 Player”, both users picked their usernames, and their game piece and go goes first |
| Test Data | backButton() |
| Steps | 1.User clicks on back button |
| Actual Results | Game takes user to select user name screen |
| Pass/Fail | Pass |

**Test Case 25**

|  |  |
| --- | --- |
| Purpose | User presses PLAY button after selecting all possible combinations ins PLAYER SETTING screen. Takes user to the game. |
| Preconditions | User choose “2 Player”, both users picked their usernames, and their game piece and go goes first |
| Test Data | playButton() |
| Steps | 1.User clicks on play button |
| Actual Results | Game takes users to select game play screen |
| Pass/Fail | Pass |

**Test Case 26**

|  |  |
| --- | --- |
| Purpose | User presses PLAY button without making any selections in PLAYER SETTING screen. Makes user the 1st player with X game piece. |
| Preconditions | User choose “2 Player”, both users picked their usernames. |
| Test Data | playButton() |
| Steps | 1.User clicks on play button  2.Click on cell to place “X” piece |
| Actual Results | By default 1st player gets “X” piece |
| Pass/Fail | Pass |

**Test Case 27**

|  |  |
| --- | --- |
| Purpose | User presses PLAY button without making any selections in PLAYER SETTING screen. Makes user the 1st player with X game piece. |
| Preconditions | User choose “2 Player”, both users picked their usernames. |
| Test Data | playButton() |
| Steps | 1.User clicks on play button  2.Click on cell to place “X” piece |
| Actual Results | By default 1st player gets “X” piece |
| Pass/Fail | Pass |

**Test Case 28**

|  |  |
| --- | --- |
| Purpose | Press TURN ON AI button for 1st user, before 1st user places a game piece. 2nd user plays against AI. |
| Preconditions | User choose “2 Player”, both users picked their usernames, game piece and turns. |
| Test Data | turnOnAi() |
| Steps | 1.1st User clicks on “Turn AI on” button  2. Let AI place piece |
| Actual Results | 2nd player was able to finish game against AI |
| Pass/Fail | Pass |

**Test Case 29**

|  |  |
| --- | --- |
| Purpose | Press TURN ON AI button for 2nd user, before 1st user places a game piece. 1st user plays against AI. |
| Preconditions | User choose “2 Player”, both users picked their usernames, game piece and turns. |
| Test Data | turnOnAi() |
| Steps | 1. 2nd User clicks on “Turn AI on” button  2. Let AI place piece |
| Actual Results | 1st player was able to finish game against AI |
| Pass/Fail | Pass |

**Test Case 30**

|  |  |
| --- | --- |
| Purpose | Press TURN ON AI button for 2nd t user, after 1st user places a game piece. 1st user plays against AI |
| Preconditions | User choose “2 Player”, both users picked their usernames, game piece and turns. 1st player placed first piece |
| Test Data | turnOnAi() |
| Steps | 1. 2nd User clicks on “Turn AI on” button  2. Let AI place piece |
| Actual Results | Game froze |
| Pass/Fail | Fail |

**Test Case 31**

|  |  |
| --- | --- |
| Purpose | Press the QUIT BUTTON while user plays against AI to quit game and take user to main menu. |
| Preconditions | User choose “2 Player”, both users picked their usernames, game piece and turns. |
| Test Data | quitButton() |
| Steps | 1. user clicks on “Quit” button |
| Actual Results | It does not reset the board, keeps current board as background |
| Pass/Fail | Fail |

**Test Case 32**

|  |  |
| --- | --- |
| Purpose | Continuously keep playing. |
| Preconditions | User choose “2 Player”, both users picked their usernames, game piece and turns. |
| Test Data |  |
| Steps | 1. Keep playing the game for various round |
| Actual Results | Game keep declaring draw after first piece was placed |
| Pass/Fail | Fail |
| Purpose | Game records updates after each game |
| Preconditions | At least 1 game was played |
| Test Data | profileList[] |
| Steps | 1. click on desired profile to see current game record |
| Actual Results | Game did not update until closed and opened |
| Pass/Fail | Fail |