# System Test Plan: 4 Connect Four

**Introduction:** This document contains a rough description of how the program should work and what should be expected when these inputs are done. Plan is subject to change because it is a rough outline.

**Test Files:**

| **Test ID** | **Description** | **Expected Results** | **Actual Results** |
| --- | --- | --- | --- |
| testInitializeGame  Author: Zachary Norton | **$ java -cp bin ConnectGUI.java** | Usage: java -cp bin ConnectGUI gridSize winConnectedPieces numPlayers  Program exits | Usage: java -cp bin ConnectGUI gridSize winConnectedPieces numPlayers  Program exits |
| testInitializedGameWithArgs8and4  Author: Zachary Norton | **$ java -cp bin ConnectGUI.java 8 4 4** | Program begins with a board size of 8 and 4 pieces required to be connected to win and 4 players | Program begins with a board size of 8 and 4 pieces required to be connected to win and 4 players |
| testGameWithNegativeBoardSize  Author: Zachary Norton | **$ java -cp bin ConnectGUI.java -1 4 4** | gridSize must be between 2 and 16  winConnectedPieces must be between 1 and gridSize  Program exits | gridSize must be between 2 and 16  winConnectedPieces must be between 1 and gridSize  Program exits |
| testEachPlayerPlays  Author: Ethan Perez | **$ java -cp bin ConnectGUI.java 8 4 4**  **Player 1 presses button for first col**  **Player 2 presses button for second col**  **Player 3 presses button for third col**  **Player 4 presses button for fourth col** | There is a red O in first col  There is a blue X in second col  There is a orange Y in third col  There is a purple Z in fourth col | There is a red O in first col  There is a blue X in second col  There is a orange Y in third col  There is a purple Z in fourth col |
| testPlayer1WinningMatchingAllPieces  Author: Ethan Perez | $ **java -cp bin ConnectGUI.java 8 4 2**  **Player 1 presses button for first col**  **Player 2 presses button for second col**  **Player 1 presses button for first col**  **Player 2 presses button for second col**  **\*\*repeats until Player 1 has four pieces in first col\*\*** | Message, “Game has been won!” is displayed. Player 1 receives one point to their total score.  Cannot place any pieces, the turns do not change, can restart the game and have players keep score. | Message, “Game has been won!” is displayed. Player 1 receives one point to their total score.  Cannot place any pieces, the turns do not change, can restart the game and have players keep score. |
| testInvalidNumOfPlayers  Author: Ethan Perez | $ **java -cp bin ConnectGUI.java 8 4 -5** | Message, “numPlayers must be between 2 and 4” is printed.  Program exits | Message, “numPlayers must be between 2 and 4” is printed.  Program exits |
| testInvalidNumOfPiecesToMatch  Author: Ethan Perez | $ **java -cp bin ConnectGUI.java 8 17 2** | Message, “winConnectedPieces must be between 1 and gridSize” is printed.  Program exits | Message, “winConnectedPieces must be between 1 and gridSize” is printed.  Program exits |
| testInvalidInputs  Author: Talha Djibril | $ **java -cp bin ConnectGUI.java abc abc abc** | Message, “gridSize, winConnectedPieces,  and numPlayers must be integers” is printed.  Program exits | Message, “gridSize, winConnectedPieces,  and numPlayers must be integers” is printed.  Program exits |
| testTooManyInputs  Author: Talha Djibril | $ **java -cp bin ConnectGUI.java 8 4 4 8 4** | Usage: java -cp bin ConnectGUI gridSize winConnectedPieces numPlayers  Program exits | Usage: java -cp bin ConnectGUI gridSize winConnectedPieces numPlayers  Program exits |
| testNotEnoughInputs  Author: Talha Djibril | $ **java -cp bin ConnectGUI.java 8 4** | Usage: java -cp bin ConnectGUI gridSize winConnectedPieces numPlayers  Program exits | Usage: java -cp bin ConnectGUI gridSize winConnectedPieces numPlayers  Program exits |
| testWonWithOnePieceLastCell  Author: Ethan Perez | $ **java -cp bin ConnectGUI.java 3 3 2**  **Player 1 presses button for first col**  **Player 2 presses button for second col**  **Player 1 presses button for first col**  **Player 2 presses button for third col**  **Player 1 presses button for second col**  **Player 2 presses button for third col**  **Player 1 presses button for second col**  **Player 2 presses button for first col**  **Player 1 presses button for third col** | Message, “Game has been won!” is displayed. Player 1 receives one point to their total score.  Cannot place any pieces, the turns do not change, can restart the game and have players keep score. | Message, “Game has been won!” is displayed. Player 1 receives one point to their total score.  Cannot place any pieces, the turns do not change, can restart the game and have players keep score. |