**Test Cases for Othello Game – Team GG**

**Validation Testing:**

* Login works successfully
  1. Login is able to create a new player with username and password (Requires Database)
     1. Able to check usernames to make sure it is not used previously
     2. Able to store password and username in database
  2. If correct username and password is input, then login is successful
  3. Any other input does not log the user in
* Game initializes
  1. The player set to play with black pieces is the first one allowed to move
  2. The timers set to 20 mins and only start for the player when their move is made, and stop when their move is done.
* Game Runs
  1. When a player places their piece, the capture is shown successfully, their score is updated, their timer stops, and the other player’s starts
  2. All possible moves are shown to the player currently placing their pieces
  3. If a player does not have a possible move, the game gives the turn back to the other player
  4. If a player’s timer goes out, it gives the turn to the other player
  5. If a game is closed (with or without user input) without the game being over, it should be stored (Requires Database)
* Game Ends
  1. Two cases to end the game:
     1. If no possible moves exist for either player, end the game
     2. If the timers run out before all possible moves are exhausted, end the game
  2. Show the final score, and store for each player (Requires Database)

**Defect Testing:**

* Login defects
  1. If code is input into the text field, it could cause a crash
  2. If an incorrect username and/or password is input (including empty strings in one or both text boxes), it could cause an error
  3. If a new username/password is created and stored, it could cause the database to overflow with data
* Game defects
  1. If a player clicks a space that is not a valid move (which includes empty spaces and other pieces), it could cause an error
  2. If a player clicks a space that is not a valid move (which includes empty spaces and other pieces), and a that counts as their move, it could change the score incorrectly and make the board have an error
  3. If a player clicks multiple spaces that are valid moves in quick succession, it could cause an error
  4. If a player’s timer goes out, the timer could continue to count down, which could cause an error
  5. If a game has exhausted all possible moves, and a player clicks on an empty space when the game ends, it could cause an error and change their score incorrectly.
  6. If a game is exited before it is over (with or without user input), then it could not store the values properly (Requires Database) and have to start a whole new game.
  7. If a game is exited and stored, it could cause an overflow error in the database.