<u>**System Test Case Document**</u>

General Setup for Hnefatafl Game Application
Instructions:
1. Download or create jar
2. Run Client and Server as Java applications

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Testcase 0
System: Hnefatafl Game Application

Test: Register to the system

Instructions:
1. Launch server and a client
2. Wait for login prompt
3. Click Register
4. Enter a host and port for connecting to a server
5. Enter a valid email, alphanumeric username, and alphanumeric password
6. Select register

Expected result:
1. Success window appears, letting one know the registration was successful
2. Redirected to login window

Alternative results:
   1. After clicking register, a pop up window notifies of a non-unique name or email
   2. After clicking register, a pop up window notifies of an invalid email (Implying the email does not follow "someString@someString.someString"

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Testcase 1
System: Hnefatafl Game Application

Test: Logging in to system

Instructions:
1. Launch client application
2. Wait for login prompt

3. Enter a registered email and associated password (Host and port are assumed correct).
4. Select login button

Expected result:
1. User associated with the entered email is verified and the correct user is logged in.
2. Redirected to game window

Alternative results:
   1. Failed Login notification, login credentials were incorrect or missing from the server (unregistered)
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Testcase 2
System: Hnefatafl Game Application

Test: View a profile and history

Instructions:
1. When logged in and on the game window
2. Enter a registered username in the User textbox
3. Select profile button

Expected result:
1. Pop up window loaded with history and profile

Alternative result:
   1. Pop up window notifies the user that the username entered does not exist.
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Testcase 3
System: Hnefatafl Game Application

Test: Inviting a user and starting a game

Instructions:
1. Launch application and login
2. Search a user in the User textbox
3. Click invite
4. In invitee application, select the user sending the invite in the invites section

5. Right click this invite and select accept

Expected result:
1. Both applications now display a game tab for the created game
2. Both applications contain the game in the Games section

Alternative Results:
1. Window notifies of an invalid user search, user is unregistered
2. Invitation is declined on invitee end, window notifies the inviter
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Testcase 4
System: Hnefatafl Game Application

Test: Making a neutral move

Instructions:
1. Begin a game following the earlier test cases
2. Wait until your turn (Red boxes around pieces)
3. Select a piece on the UI using the mouse
4. Release the mouse on the desired space.

Expected result:
1. Assuming this was a valid move, the selected piece should move to desired space.
2. Turns switch (no more red tiles around pieces)
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Testcase 5
System: Hnefatafl Game Application

Test: Making a capturing (non-king) move

Instructions:
1. Begin a game
2. Wait until your turn
3. Select a piece on the UI using the mouse

4. Release the mouse on a tile that would "sandwich" an opponent's piece (non-yellow piece). (Two of your pieces on both sides (top/bottom or left/right) with opponent's piece in between)

Expected result:
1. Assuming this was a valid move, the selected piece should move to desired space.
2. "Sandwiched" piece will be removed from the board.
3. Turns switch
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Testcase 6
System: Hnefatafl Game Application

Test: Making a king-capturing move

Instructions:
1. Begin a game
2. Wait until your turn
3. Select a piece on the UI using the mouse
4. Release the mouse on a tile that would "sandwich" an opponent's king (yellow piece) on all 4 sides.

Expected result:
1. Assuming this was a valid move, the selected piece should move to desired space.
2. Opponent's king will be removed from the board.
3. A dialogue box will pop up informing the attacker that he/she has won. The game will be over and removed from the main menu.
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Testcase 7
System: Hnefatafl Game Application

Test: Making a capturing move with "unique" tiles.

Instructions:
1. Begin a game
2. Wait until your turn
3. Select a piece on the UI using the mouse

4. Release the mouse on a space that would cause the opponent's piece to be "sandwiched" between your piece(s) and a "unique" tile (Corners and center).

Expected result:
1. Assuming this was a valid move, the selected piece should move to desired space.
2. Piece "sandwiched" is removed from the game.
3. If piece removed was the king, the game will end in victory and inform of such.

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Testcase 8
System: Hnefatafl Game Application

Test: Defender win

Instructions:
1. Begin a game
2. Wait until your turn
3. Select a piece on the UI using the mouse
4. For the defender: release the king on any edge space

Expected result:
1. Assuming this was a valid move, the selected piece should move to desired space.
2. A dialogue box will appear, informing the defenders they have won, and the game will be over.

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Testcase 9
System: Hnefatafl Game Application

Test: Quitting a game

Instructions:
1. Begin a game
2. In main menu, right click the desired game
3. Select Leave

Expected result:
1. Both players of the game will have the game removed from their menu.
2. The player who left will be given a loss, the other player will be given a win

3. Searching each user at the main menu and viewing profiles should verify

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Testcase 10
System: Hnefatafl Game Application

Test: Unregister from the system

Instructions:
1. Ensure logged into the server
2. Click Unregister via User menu

Expected result:
1. This player will be removed from the server and the application will redirect to login.
2. Logging in with the deleted account will not be successful.

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Testcase 11
System: Hnefatafl Game Application

Test: Starting a game with the AI

Instructions:
1. Ensure logged into the server
2. In User search bar, search for "AI"
3. Invite this user to a game
4. Make any move

Expected result:
1. A game is auto-accepted by the AI and a game is started
2. After making a move, the AI should make a move on it's own

Changes as of 11/10/2017:
-Added more detail to setup, both for command line and IDE run situations
-Added test case 0 for registering to the system
-Added test cases 2 and 3 for newly implemented features

-Added test case 10 for unregistering to the system
-Changed the wording on multiple test cases to be more verbose.

Changes as of 11/26/2017:
-Added verbosity to some test cases for inputs/outputs expected
-Added test case for AI