# Introduction - GoLD

Aim of user testing is find out the ease of use of the program and the effectiveness of the computer within the program. In addition to these, user testing is also to provide feedback on the visual design of the program. "GoLD" program short for Go Life & Death is a software which allows users to play through and solve life and death problems of the board game called Go. For the purpose of getting you started I will provide step by step instructions to point out key aspects of GoLD and from there you can spend as much or little time as need to test out the program.

During or after testing please fill in google form to give feedback. Please remember this is not a test of your ability but rather the test of the program. If you have any question about the experiment feel free to contact me before continuing.

## Play Mode

### Buttons

Start: Tells the computer to start searching for the best move as the current colour.

Stop: Stops the computer in middle of the search, and makes the best move found so far in the search.

Pass: Allows the user to pass – only if you are the defending player otherwise pass is disabled due to the fact if the attacking player passes then the it results in the attacking player losing.

Reset: Goes back to the board state in which the board was loaded in.

Auto Play: Enable the AI to begin immediately after you move.

Switch Turn: Changes who is to play next.

Limit Breadth: If on, the computer only looks at the set number of valid moves at each depth. Otherwise looks at every valid move in each depth.

Limit Depth: If on, the computer only looks a set number of moves ahead before selecting a move. Otherwise it keeps searching until it finds a winning move or until there are no more moves to search.

You can increase or decrease the breadth and depth using + or – buttons.

The number right of Limit Breadth is the breadth limit.

The number right of Limit Depth is the depth limit.

## Step by Step Tutorial

1. You should have the program, if not please contact me
2. Start the program
3. A program window for GoLD should appear
4. This is the main menu, to begin with choose “Play”
5. Here we can see a Go Board on the left and some buttons on the right
6. To load a problem to solve, press the load button
7. From the Problems folder choose “Tutorial.txt”
8. The problem should be loaded on to the screen
9. Few things to note:
    a. Stones appear on the board representing the problem inside the file.
    b. Only the points outlined by circles are play, these points are determined by the creator of the problem to discard irrelevant points on the board
    c. Either you or the computer can play first, “Start” tells the computer to play first or you can simply place a stone to begin
    d. Auto Play is enabled by default this means the computer automatically plays once you make a move
10. You should play first by playing a stone at e1 - this move guarantees victory.
11. With Auto play on, the computer might have already a made a move at d1
12. You might have noticed f0 is highlighted in red, this is because white cannot play due to the self-capture rule.
13. At this point you can play anywhere and win , keep playing until you capture the black stones.
14. This is the basic idea behind the program to solve problems where the computer will try to play against you, you can also allow the computer to solve the problem and against itself or you
15. Player v player, player v computer or computer v computer are all possible within GoLD using the buttons on the right of the screen.

## Try Out Other Problems

To try out more problems even if you don’t understand Go , use the problems in “From Go Problems” folder. These problems are from an online collection of go problems at www.goproblems.com , this site allows users to create problems and have pre-set solutions, so it will be helpful even you don’t know how to play Go.

The files names in “From Go Problems” folder contains the ID for them on the website.  For example, “(d4)7106-16kyu.txt”  the number after the brackets and before the hyphen is the ID for the problem on website. Going to www.goproblems.com/7106

There are different options which allows the computer to search more and come with a better move against your moves. Try varying the computer options to how it affects the time the computer takes to make a move and resulting move. Feel free to try out different problems from the problems folder and see how they work.

## Editor Mode

Editor mode allows the user to make their own problems and save them in order to play through them on play mode. For the purpose of evaluating usability I won’t provide a step by step tutorial for editor mode but here are some ideas which are used within the editor mode.

- Valid points on the board needs to be set by the editor depending on the problem
- Keystones need to be place in order mark the stones which are the objective of the problem, these stones need to live if you are the defending side or die if you are the attacking side
- You can only place keystones of one colour within a problem
- A problem needs keystones and valid points on the board to become a valid problem
- You can switch between editor and play mode by pressing “Switch Mode”
- Switching from editor mode to play mode , board will be transferred to play mode
- Switching from play mode to editor mode , board will not be transferred to editor mode.

To try editor mode out , you can choose life and death problems from http://www.goproblems.com/problems.php3 and try to recreate it. Make sure to add relevant  valid points and also place keystones on the group of stones that are to be killed or defended.