Game: Lines of action

Board size: 6x6, 8x8

Android app: <https://play.google.com/store/apps/details?id=teddydroid.app.loa.free> (if you want to play)

* You can disallow location permission, it will work perfectly in most cases.

**Resources:**

<http://www.boardspace.net/loa/english/index.html#howto-play> (also check the unusual endgames)

<https://en.wikipedia.org/wiki/Lines_of_Action>

(We are considering no draw)

You have to design UI and write move logic using adversarial search with alpha-beta pruning. When the player clicks on a specific checker, show its all possible legal positions after move (or show “no legal move” if there isn’t any).

Keep provision to play

* Human vs human
* Human vs AI

Each move shouldn’t take more than 1 seconds in 6x6 board and 2 seconds in 8x8 board. At each depth, keep a solution ready based on heuristic. When the time is over, return the current best solution and make a move according to it.

* Keep your code clean and modular. Don’t write the same block of code multiple times, rather use functions.
* You can use any language (C++, Java, Python). But make sure to make the code efficient. Otherwise you may need to prune at a very low depth, which will result in poor performance of the game agent. No need to mention, Python is inherently slow in such searches unless you make the algorithm very efficient.
* Copy all your files in a folder and name that folder with your 7 digit student id (say, 1605125). Then compress that folder to a zipped file and submit that zipped file to moodle.