

Checkers (Draughts) Online Implementation Functional Needs Statement

Implement an app that plays the well-known game of checkers, or draughts. The app allows both human and computer players in any combination. The app can be played on a single device or on two communicating devices.

The app shall: Gather and display user names. Decide who makes the first move (assign the black pieces). Display a proper board. Prevent illegal moves. Determine when the game ends and identify the winner, loser, or indicate a draw.

Optionally the app may: Display possible moves, identify pieces under attack, give suggested moves, or anything else you think interesting and helpful to the user.

User interface: the board and moves must be displayed on the screen. The display can be anything from a simple text grid to a full graphics implementation including touch screen. Keep track of the number of moves and elapsed time of the game.

Devices: implement for one or more of Windows PC, Apple Mac, Android phone/tablet, Apple phone/tablet.

Communication: allow both players to use the same device but mandatory to allow two devices to interact (one player on each). Communication between devices is *tbd* but may include SMS text messages between mobile devices, email, messages exchanged online through a server, or humans talking to each other. Part of the work is to determine the format and method of communication and all teams must agree on this interface and any changes.

Playing Options: 2 players on 1 device, 1 player against computer on same device, 2 players on 2 devices, 2 computers on two devices. Keep Turing Test in mind!

See additional information, rules of the game, and more ideas at <http://people.cs.luc.edu/whonig/comp-474/course-materials/system-projects/checkers-draughts>