

## **Checkers**

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### **Game Description.**

Checkers is a two-player board game with a main goal of capturing all the opponent's pieces. Capturing the opponent's pieces is required, done by jumping over the enemy's pieces using diagonal moves. It is played on a 8x8 checkerboard with players across different computers connected through a network. The players are able to play simultaneously with each other and their move is shown or reflected on the opponent's screen. When a piece is clicked, possible move suggestions appear on the screen.

Initially, both players have 12 same colored pieces. The player with the dark colored game pieces gets the first move, after which, players take alternate turns. Game pieces are only allowed to change position diagonally, single square at a time only if a jump is not an option. Jumps happen when an opponent's piece is to be captured, moving the captor piece to the other's piece's diagonally adjacent position. The piece captured will then be removed from the checkerboard. When all of the pieces are removed from the checkerboard or one player cannot make a move, the game ends.

Game pieces are of two types: man and king. At first all pieces are men. These uncrowned pieces are limited only to diagonal forward moves; one square at a time if the move is non-capturing - not involving a jump. When a man reaches the out-most row forward, it becomes a king. Kings have the power to move forwards as well as backwards and perform successive jumps in different directions.

Players are connected through a network. To establish their connection, TCP/IP is used, enabling checkerboard changes to be reflected on both player's screen. Maintaining the network and communication is achieved by using ports and sockets.

### **Objects.**

#### **Pieces.**

Fixed Parameters: color, size

State: position, type, captured or not captured

Action: jump and change position.

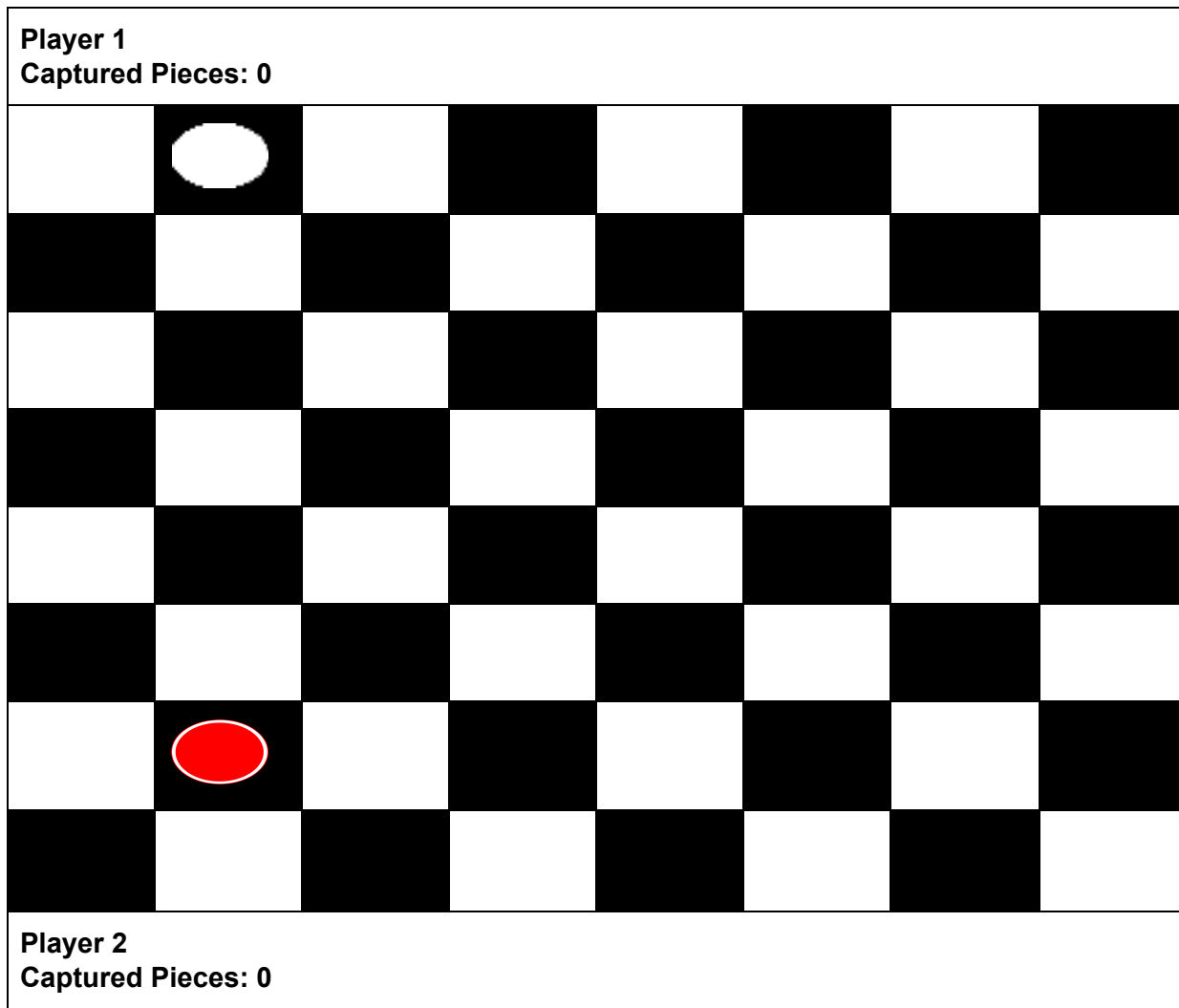
#### **Board.**

Fixed Parameters: vertical and horizontal dimension, screen position, color

State: number of checker pieces

Action: draw

**Screen Layout.** (Pieces and Board Design subject to changes)



Screen dimensions: 1200 pixel x 740 pixel

Square dimensions: 120 pixel x 74 pixel

Information Panel dimensions: 1200 pixel x 74 pixel

Pieces color: red, white

**Game Control.** Players use mouse cursors on their respective machines to move pieces.