Spectacular plans for a spectacular game

# Interactive UI elements

The game contains only interactive element: this is a table which contains all pieces: projected on top of checkers board. The table has the class “pieces”. Before the player makes a move pieces that have legal moves are highlighted and “activated”.

To check for legal moves: Check whether the player is forced to do an enemy capture: if so only the pieces that can capture that piece have legal moves. If this is not the case check which pieces are able to move forward (or backwards in the case of kinged pieces).

Mouse click on a piece in the <table> with the class “pieces” check whether the piece is activated. If it is activated highlight the legal moves. If any of the squares with a legal move is clicked on move the piece there. If an enemy piece is captured increment this players capture counter and check if the opponent has any pieces left. If not the player has won the game. If the opponent has pieces left check if the moved piece has reached the opponent’s back line. If so the piece is kinged and is allowed to move backwards and forwards.

# Javascript code design:

For our game design we will mostly rely on the module design pattern as it is the most maintainable and secure design pattern.

## Module 1: game statistics module

The first JavaScript object that should be implemented is a game statistics module. This module should be able to be pinged. This allows for the server to keep track of how many games are run at the same time. Second the module should keep track of the time passed in the current game. This should be added to the minutes played statistics after the game is finished.

## Module 2: game statistics controller

The game statistics controller is an object in the main screen that keeps track of the amount of game statistics modules (gsm’s) currently active and updates the statistics accordingly. Furthermore it saves the amount of games played and the amount of time spend in game.

## Module 3: player statistics

The player statistics module keeps track of the amount of games the player has won. The player statistics object is bound to a player ID.

## Module 4: game table

the entirety of the game is contained within a single table. This can be turned into a JavaScript object. This module should be able to do the following things: first of all return where in the table all pieces are located. Secondly it should return all pieces that are able to move. And third of all it should be able to return all legal moves for the pieces that are able to move (and increment the relevant statistics and table etc.).

## prototype 1: game table entry

to ease calculations in the game table every entry should be a separate entity. The game table entry should have pointers to the four entries diagonal to the entry. Furthermore it should have a state variable from which can be determined whether it is empty (0) there is a piece of player 1 (1) or a piece of player 2 (2) present at the square. This object should also edit the html accordingly. This object should also contain functions for allowing white “legal” circles to be placed in the square.