SYST10199

Web Programming
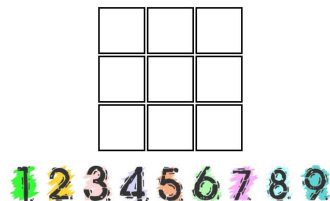
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ACTIVITY 108

Summer 2019, Week 4

Problem

Design a game of number scrabble and write a simple program for two human players.
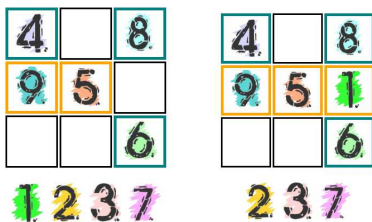
Implement using unobtrusive Javascript and functional programming
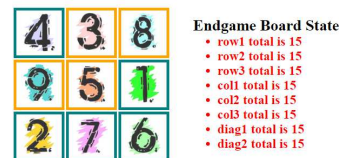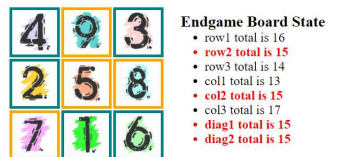
Additional Information

Starting game board

Intermediate state examples

Ending game board examples

Describe the problem

From Wikipedia, https://en.wikipedia.org/wiki/Number_Scrabble

Number Scrabble (a.k.a. Pick15) is a mathematical game where players take turns to select numbers from 1 to 9 without repeating any numbers previously used, and the first player to amass a personal total of exactly 15 wins the game. The game is isomorphic to tic-tac-toe, as can be seen if the game is mapped onto a magic square.

Play

Number Scrabble is played with the list of numbers between 1 and 9. Each player takes turns picking a number from the list. Once a number has been picked, it cannot be picked again. If a player has picked three numbers that add up to 15, that player wins the game.However, if all the numbers are used and no player gets exactly 15, the game is a draw. The game is identical to tic-tac-toe, as can be seen by reference to a 3x3 magic square: if a player has selected three numbers which can be found in a line on a magic square, they will add up to 15. If they have selected any other three numbers, they will not.

Design solution