

Game - Catch the Space

Overview:

This document describes requirements for the software implementation of a classic game which I have titled Catch the Space. This software will allow two players to play against each other (or for one player to play against the computer. Not sure yet!) A description of the game plus the requirements of this implementation are provided below.

The game:

The players are presented with a chart of 16 dots. Each player is assigned a colour and they take turns drawing lines from one dot to another in either a vertical or horizontal direction. The dots are the vertices of 9 squares. The player that draws the last line and creates a square – no matter if the other 3 lines were their colour or not – acquires the centre space of that square. The lines around this square change to black and the centre colour takes the background colour of the player.

In one go, if the line that the player drew completes one square and the line changed the adjacent square to 3 lines, then he may make the 4th line and get this square too in this turn. The players turn ends when no more connecting squares can be acquired as a result of the first line created that turn. The game ends when all the space – squares are taken; the player with the most squares win.

Software implementation:

UI elements:

The software will present the game with the UI elements listed below:

- 9 adjoining squares in a 3x3 formation; a black dot at all the vertices', total of 16, and a label at each side of each square, total of 24.
- Toolbar on top that has:
 1. Label to display Game messages.
 2. Start button
- Toolbar on the bottom that has the score for each team.

Software Requirements:

Process and Rules:

- The game starts when the player clicks Start. Until then all clicks on the buttons are ignored, and the game status message is "Click Start to begin Game."
- After Start is clicked: The message "Current Turn: Red" is displayed. The player does their turn by clicking one of the labels between the dots, their 'line' is drawn by the label changing to their team colour.
- After the red player has drawn its line the turn changes, and this is displayed in the game message label. If a player clicks a line that is already taken, the click is ignored, with no effect to the line or current turn.
- When there are 4 lines that form a square, the centre square changes to the colour of the player that completed the square. The lines of the square become black. The player's score is adjusted accordingly. If there are possibilities of now completing further squares as a result of the first move then the turn doesn't change until no further moves are possible.
- Once all the spaces 'are caught' the game is over. A message box will pop up with the winning team and its total of squares / or this will just be displayed in the message game label.
- If the user clicks Start in middle of a game, then the game should interrupt and begin a new game.