

Cmpu670 Project Report - A Dots and Boxes Player

Michele Albach, Apr 9th 2019

List of Figures

Note: All figures created using dotsandboxes.org



Figure 1: An empty 3x3 dots and boxes board (the number of boxes is counted, not the number of dots).

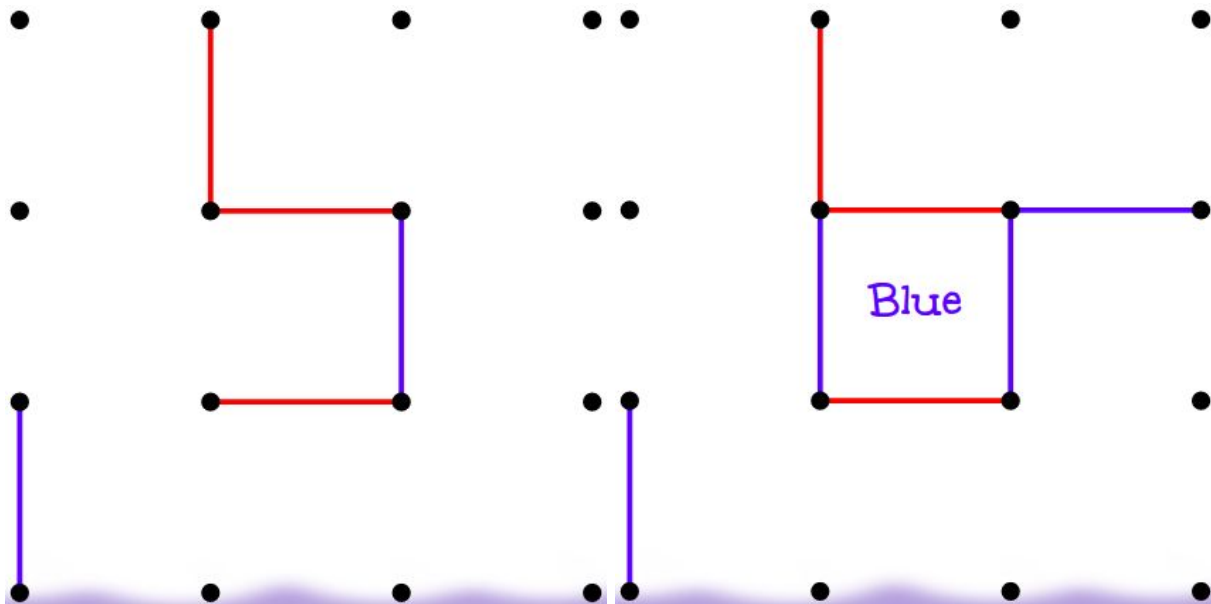


Figure 2A: Before

Figure 2B: After

Figure 2: The blue player can capture the center box, but then must take another turn.

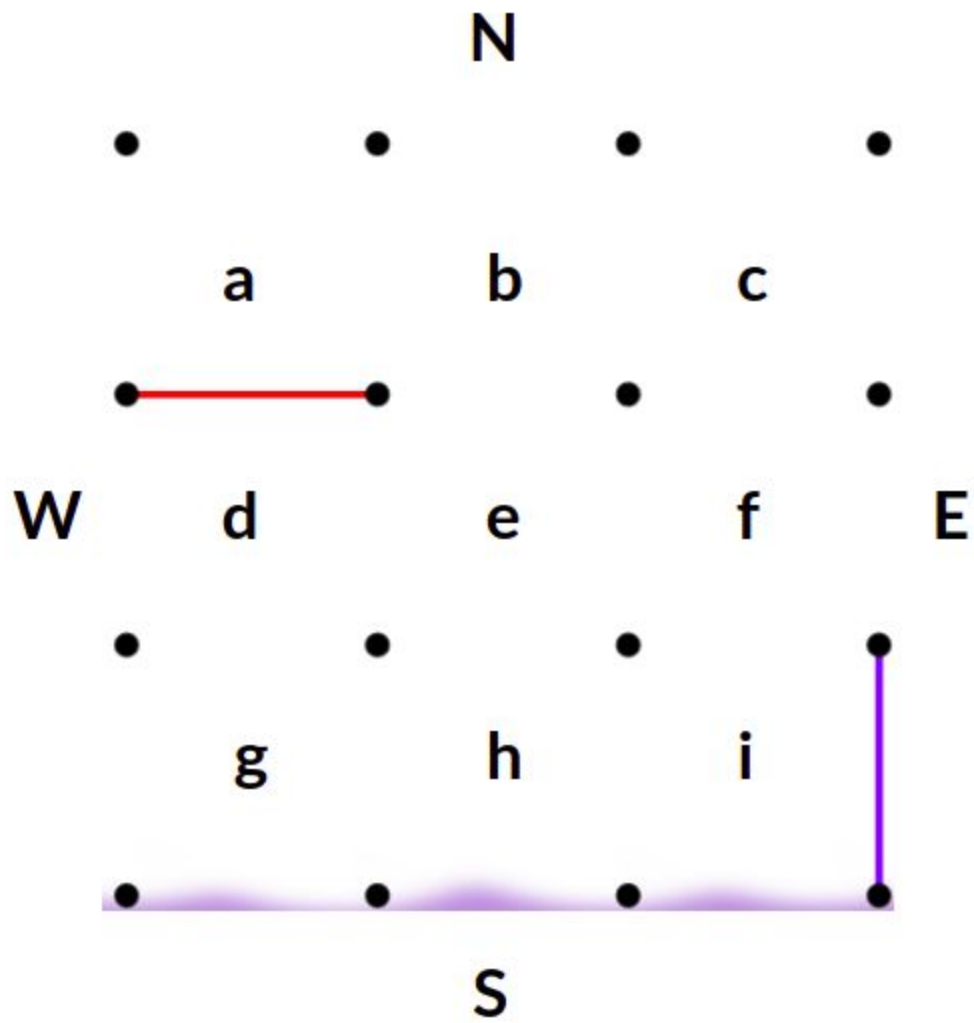


Figure 3: An example of my labelling system in a 3x3 game. The red line would be labelled 'ad' and the blue line 'iE'

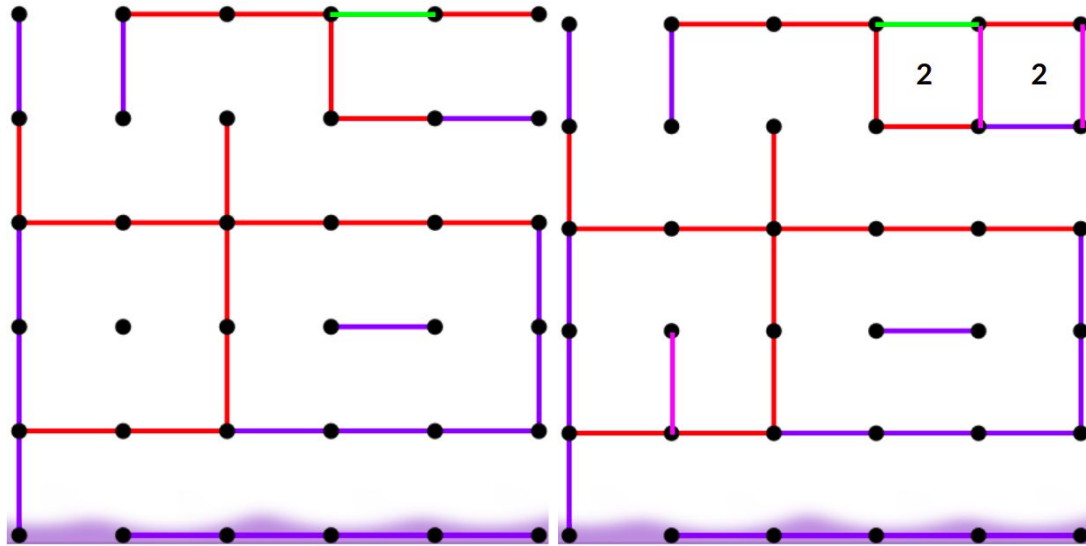


Figure 4A: Before

Figure 4B: Without DC

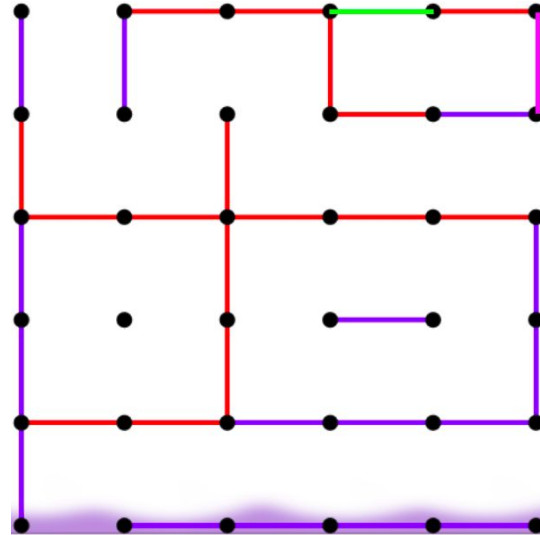


Figure 4C: With DC

Figure 4: An example of double-crossing (DC). After player 1 draws the green line, player 2 could either take the two boxes and then play again (no DC), or they could sacrifice the two boxes by enclosing the chain in order to not have to play again.

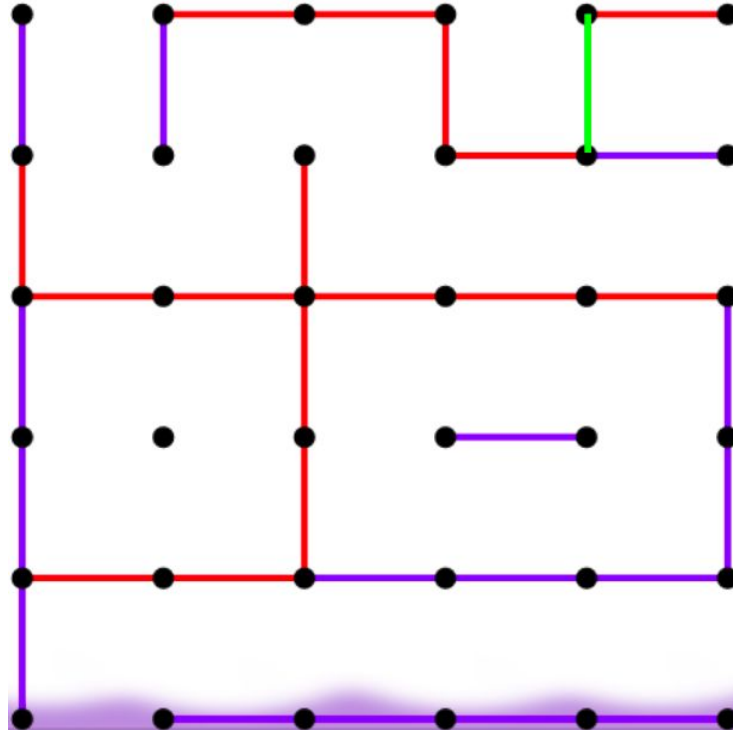


Figure 5: This green move inhibits the other player from double-crossing (as opposed to in Figure 4A)

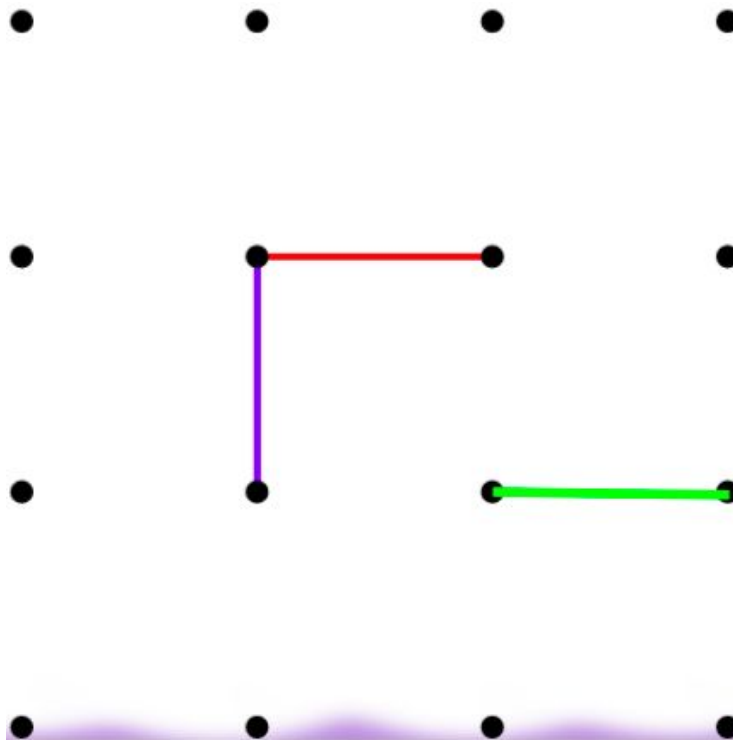


Figure 6: This green line is played to avoid creating a loop in the bottom right corner