

Minesweeper Solver Analysis

Brian Stack, bis12@case.edu

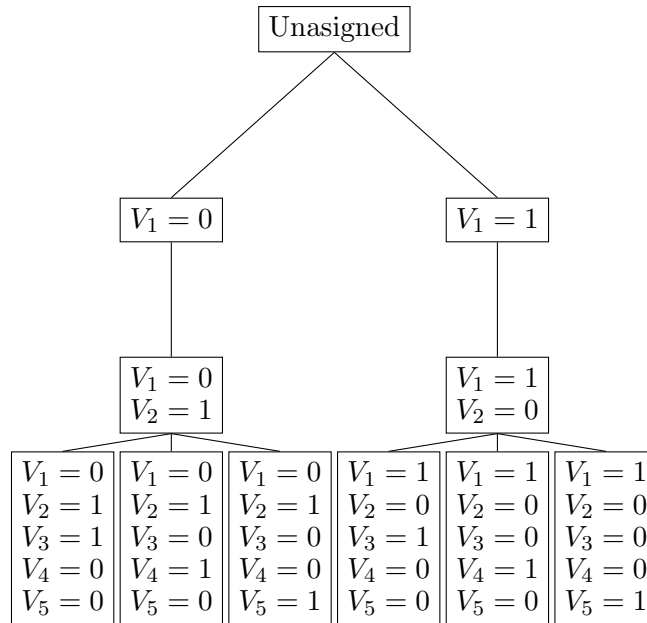
March 9, 2011

Analysis of Game

a)

$$\begin{aligned} C = \{ & (V_1, V_2) = V_1 + V_2 = 1, \\ & (V_3, V_4) = V_3 + V_4 = 1, \\ & (V_1, V_2, V_3, V_4, V_5) = V_1 + V_2 + V_3 + V_4 + V_5 = 2 \} \end{aligned}$$

b) In the tree, if any nodes did not branch for their children, I collapsed them into one to save space.



The next move is the same no matter which path is chosen.

c) All six possibilities are enumerated below

V_1	V_2	V_3	V_4	V_5
0	1	1	0	0
0	1	0	1	0
0	1	0	0	1
1	0	1	0	0
1	0	0	1	0
1	0	0	0	1

d) a

Observations on Solutions

c) ababab