Theory of Computer Games

Homework #6

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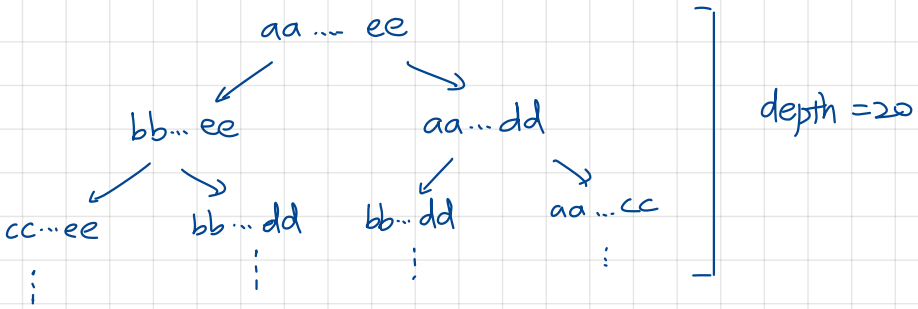
1. For DLP game with “aabcdeabcdbcdeabcdee”, draw the dependency-based search tree to solve this. Also describe how many nodes to explore, if use the traditional search with and without transposition table respectively.

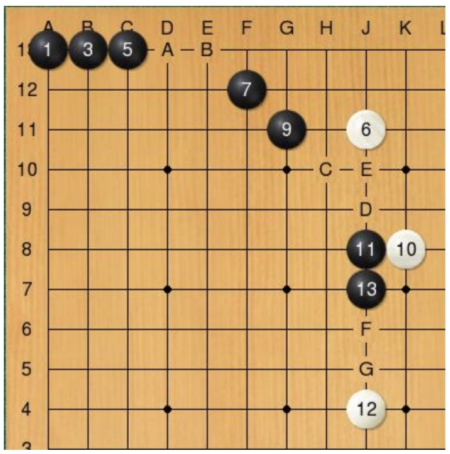
(1)

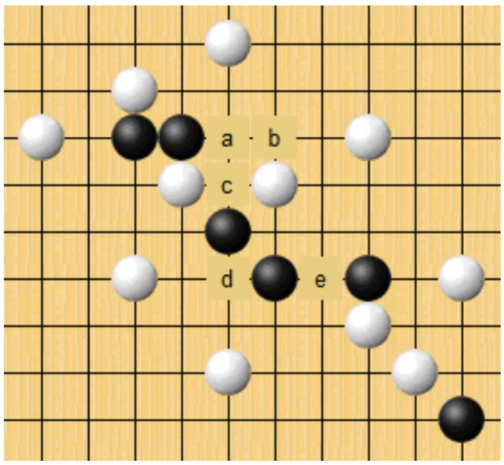
(2) If using transition table : $10 \times 10 = 100$ ↑ nodes (Pairing each 10 possibilities on left & right)

If not using transition table : $2^{20}-1$ ↑ nodes

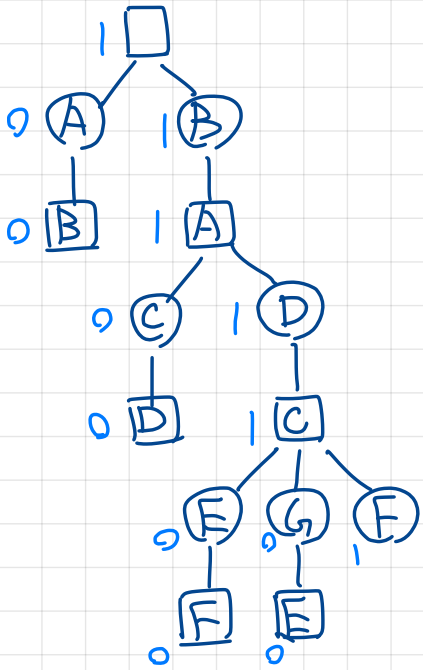


2. Consider the Gomoku game. For the lower left case, where Black to move, depict its λ^1-tree and also evaluate its value. For the lower right case, where Black to move and to win, depict its λ^2-tree.

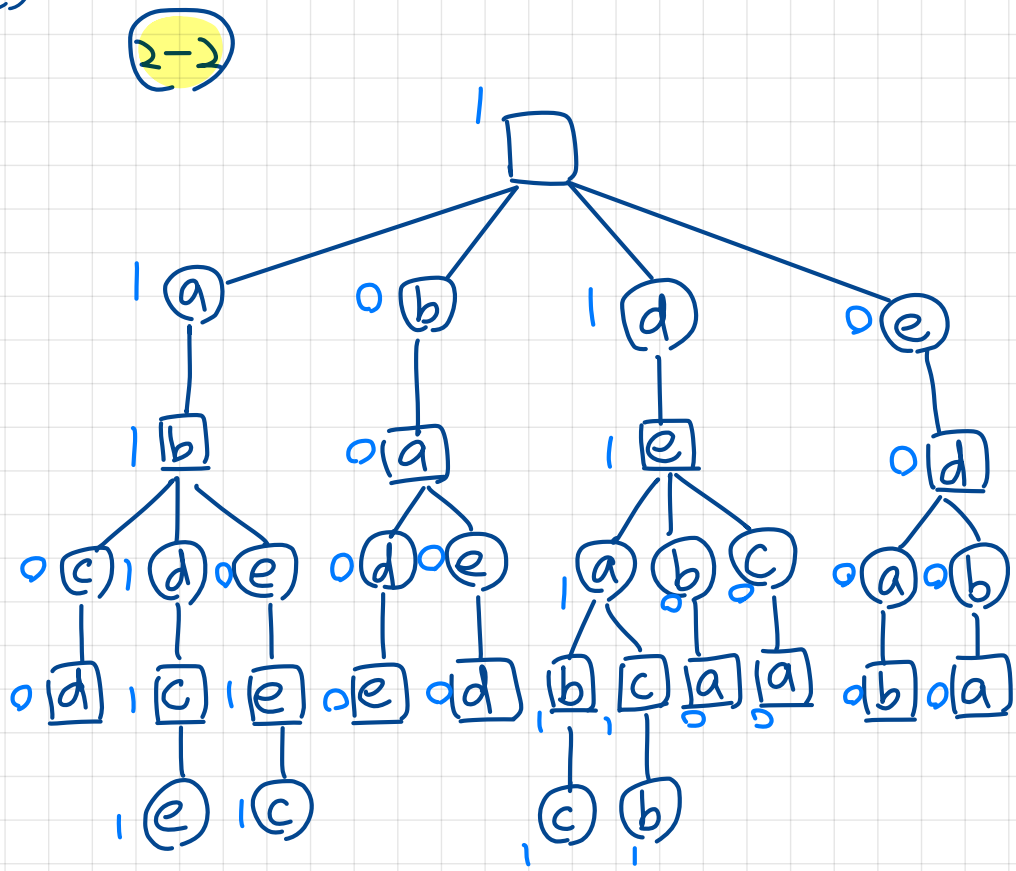




2-1



2-2



3. If black is played at m10, depict all the next λ^2-moves by white.