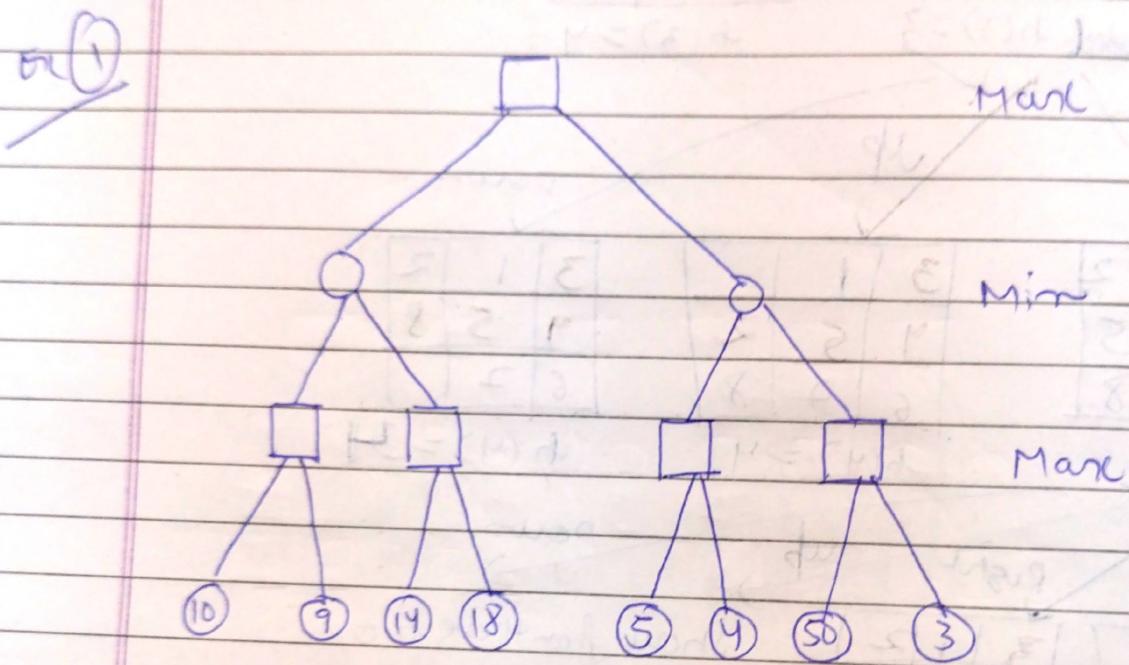


Game PlayingMini Max Search Algorithm

Consider the following two player game tree in which the static scores are given from the first player's point of view



- Apply the Mini Max Search algorithm and compute the value of the root of the tree (note: First player is Max in this case)
- Also find the most convenient path for the Max Node.

Steps for mini max search Algo.

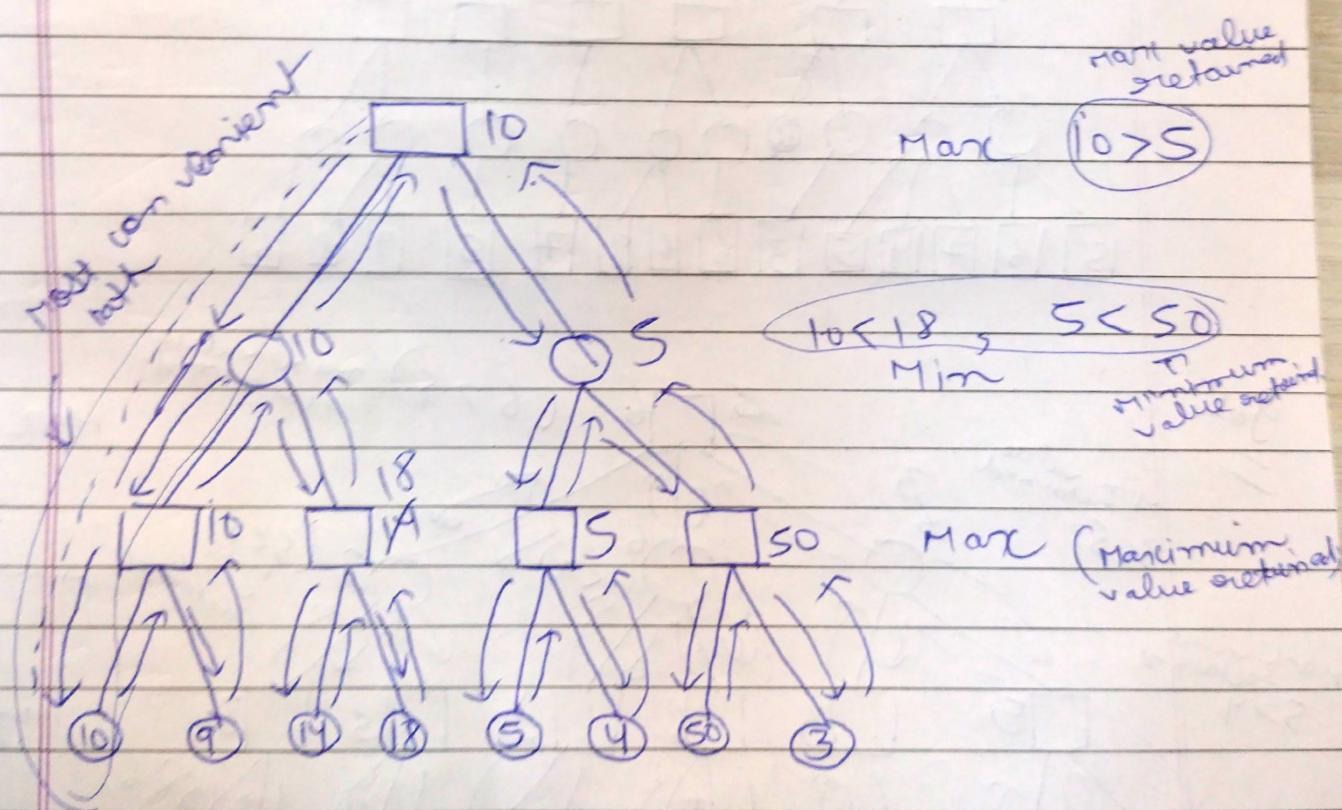
- ① Generate the whole game tree to leaves.
- ② Apply utility (payoff) function to leaves.
- ③ Use DFS for expanding the tree.

④ Back up values from leaves towards the root.
 - a Max node computes the maximum value from its child values.

- a Min node computes the minimum value from its child values.

⑤ return value reaches the root: optimal value move is determined.

Note: As in this question, tree is already given and values at the leaves are already given, step ① & ② can be skipped.



$$10 > 9, 18 > 14, 5 > 4, 50 > 3 \rightarrow$$

Now the value of root node = 10

Now check the path ~~as~~ which has all the internal values as 10. It is the most convenient path!

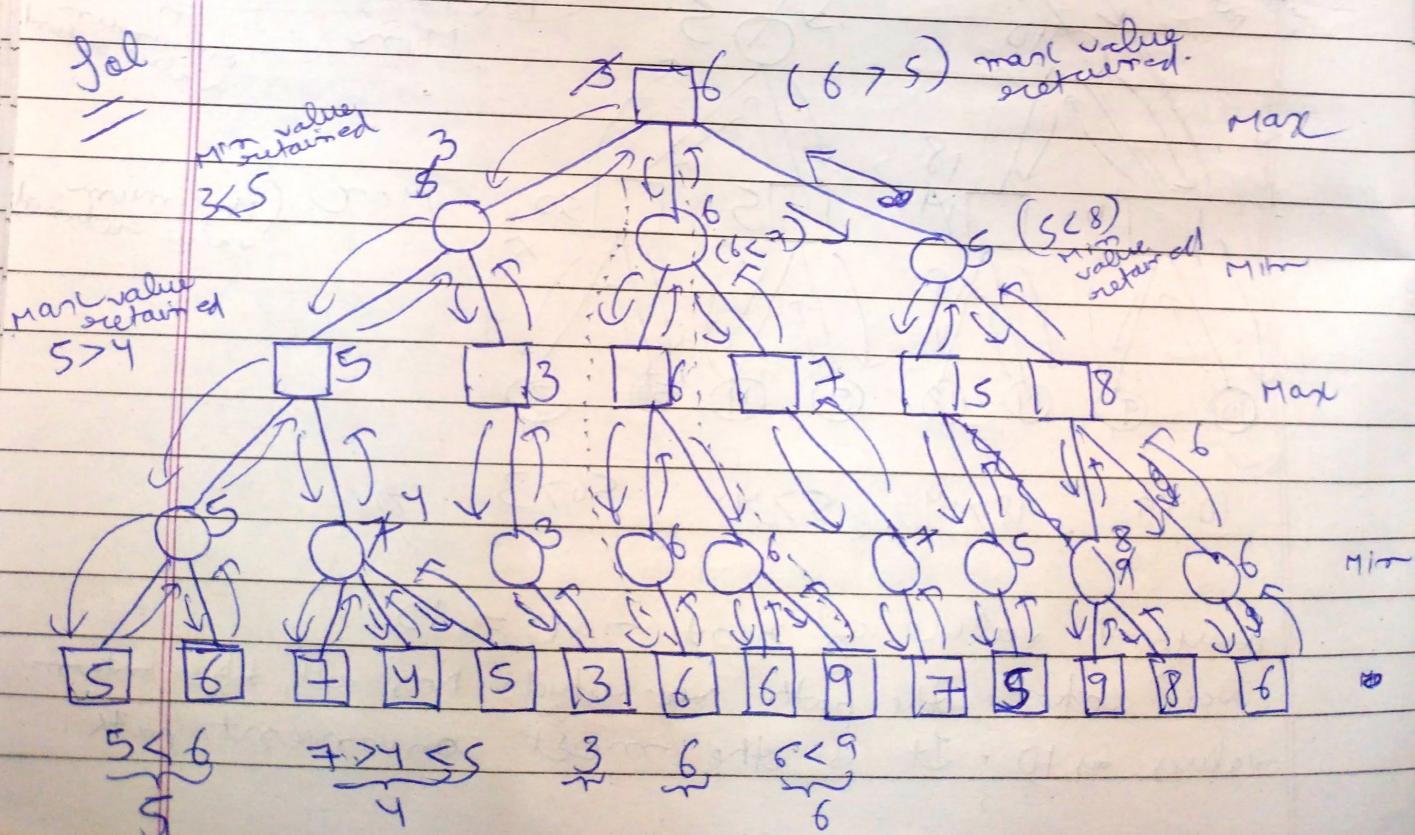
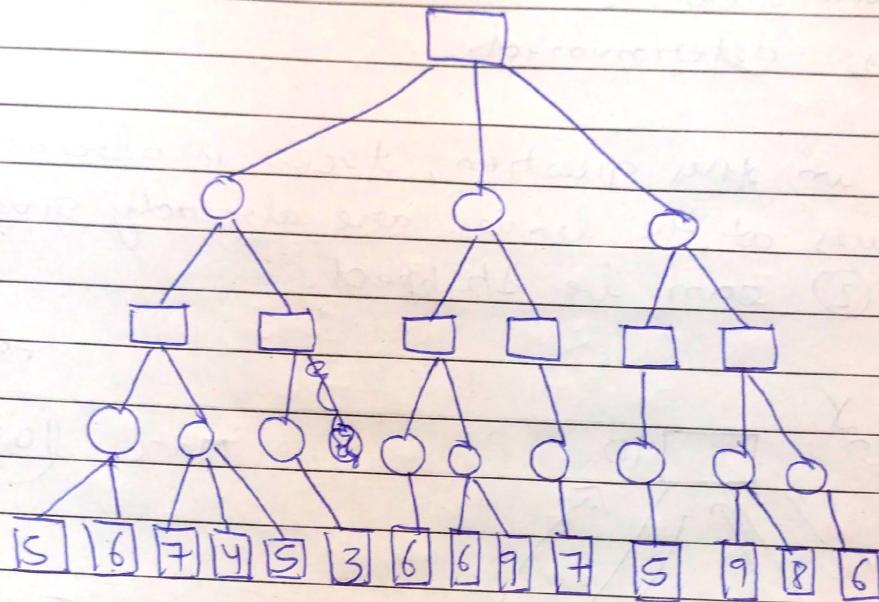
五〇二

Consider the following two player game tree in which static scores are given from the first players point of view. max

mark

O min

Apply the Min-Max Search algorithm and compute the value of the root of the tree. Also find the most convenient path for Max node.



Two The value of root node for
max player to win is coming out to be
6.

Also two convenient paths have been
identified shown as dotted lines which
can cause this winning.