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Class :- B.E - IT

Roll No :- 10 ~~XXXX~~

Subject :- PS Lab

DOP

DOA

Remark

Sign.

Alpha Beta pruning

→ Alpha-Beta pruning = Alpha beta pruning is a modified version of the min max algo. It is an optimization technique for the min max algo.

Alpha(α) = The best (highest) value
= Initial value if alpha is $-\infty$

Beta(β) = The Best (highest value)
= Initial value if beta is $+\infty$

Rule & condition.

- 1) The max player will only update the value of alpha.
 - 2) The min player will only update the value of β .
 - 3) We will only pass the alpha, beta value to the child nodes.
 - 4) Node values will be passed to upper nodes. Passed of value of alpha & Beta.
- condition to prune: $a \geq b$ or $b \leq a$.
 - when alpha is greater than or equal to beta

$$8) \beta(\infty, -15) = -15$$

-min(Right)

$$\alpha = 3$$

$$\beta = -3$$

$$\alpha > \beta$$

Also the next node is pruned.

$$9) \alpha = 3$$

$$\beta = \infty$$

Max

$$\alpha(3, -3) = 3$$

solution

$$8) \beta(\infty, -15) = \infty - 15$$

- min (Right)

$$\alpha = 3$$

$$\beta = -3$$

$$\alpha > \beta$$

Also the next node is pruned.

$$9) \alpha = 3$$

$$\beta = \infty$$

Max

$$\alpha(3, -3) = 3$$

solution

Start Answer

Depth - +

Branching Factor +

Swap Min/Max Regenerate Tree

Reset Tree Show Solution

Check Answer Correct

