

Write the Python Program to implement Alpha & Beta pruning algorithm for gaming.

```
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def alphabeta(node, depth, alpha, beta, maximizingPlayer, values, index=0):
    if depth == 0:
        return values[index]
    if maximizingPlayer:
        best = float('-inf')
        for i in range(2):
            val = alphabeta(node+1, depth-1, alpha, beta, False, values, index+1)
            best = max(best, val)
            alpha = max(alpha, best)
            if beta <= alpha:
                break
        return best
    else:
        best = float('inf')
        for i in range(2):
            val = alphabeta(node+1, depth-1, alpha, beta, True, values, index+1)
            best = min(best, val)
            beta = min(beta, best)
            if beta <= alpha:
                break
        return best
values = [3, 5, 6, 9, 1, 2, 0, -1]
print("Optimal value:", alphabeta(0, 3, float('-inf'), float('inf'), True, values, 0))

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Python 3.13.3 (tags/v3.13.3:6280bb5, Apr  8 2025, 14:47:33) [AMD64] on win32
Enter "help" below or click "Help" above for more information.
>>>
= RESTART: C:\Users\ROJAYADAV\AppData\Local\Programs\Python\Python313\python.exe
Optimal value: 5
>>>
```