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***Artificial Intelligence (Lab)***

***Assignment - 8***

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**Program:**

Artificial Intelligence.

**Section:**

BSAI-3A

**Question # 1:**

Code of "Min Max Algorithm"

**Code:**

import math

# cd= currnt depth

# nd= node index

# mt= max turn

# sc= scores

# td= target depth

def minimax (cd, ni, mt, sc, td):

    if (cd==td):

        return sc[ni]

    if (mt):

        return max(minimax(cd + 1, ni \* 2, False, sc, td),

        minimax(cd + 1, ni \* 2 + 1, False, sc, td))

    else:

        return min(minimax(cd + 1, ni \* 2, True, sc, td),

        minimax(cd + 1, ni \* 2 + 1, True, sc, td))

scores=[3, 5, 2, 9, 3, 5, 2, 9]

treeDepth=int(math.log(len(scores), 2))

print("The optimal value is : ", end = "")

print(minimax(0, 0, True, scores, treeDepth))

**Output:**

