Lab 11

19F-0151

Ahmad Raza

[Company name]  [Company address]

**Task**

import math  
class minmax:  
 def minmax\_algo(self,currentnode, index, maxt, arr, depth):  
 if (currentnode == depth):  
 return arr[index]  
 if (maxt):  
 return max(self.minmax\_algo(currentnode + 1, index \* 2, False, arr, depth),  
 self.minmax\_algo(currentnode + 1, index \* 2 + 1, False, arr, depth))  
 else:  
 return min(self.minmax\_algo(currentnode + 1, index \* 2, True, arr, depth),  
 self.minmax\_algo(currentnode + 1, index \* 2 + 1, True, arr, depth))  
  
if \_\_name\_\_ == "\_\_main\_\_":  
 obj = minmax()  
 arr = [4, 6, 2, 10, 14, 6, 21, 22]  
 depth = math.log(len(arr), 2)  
 print("The optimal value in this tree is : ")  
 print(minmax.minmax\_algo(minmax,0, 0, True, arr, depth))

**Output:**

Text

Description automatically generated