AI Lab 4
MinMax Algorithm
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Code

```
import math as m
def minimax(curDepth,nodeIndex,maxTurn,scores,targetDepth):
   if(curDepth == targetDepth):
      return scores[nodeIndex]
   if(maxTurn):
      return
max(minimax(curDepth+1,nodeIndex*2,False,scores,targetDepth),minimax(curDepth+1,nodeIndex*2+1,
False,scores,targetDepth))
   else:
      return
min(minimax(curDepth+1,nodeIndex*2,True,scores,targetDepth),minimax(curDepth+1,nodeIndex*2+1,
True,scores,targetDepth))

value = int(input("Please Enter number of indexes"))
scores = []
for i in range(value):
   a = int(input("Enter a number "))
   scores.append(a)
c= int(input("Enter current Depth: "))
n= int(input("Enter Node Index: "))
treeDepth = m.log(len(scores),2)
print("The optimal value is:",end="")
print(minimax(0,0,True,scores,treeDepth))
```

Output

```
Please Enter number of indexes8
Enter a number 12
Enter a number 5
Enter a number 2
Enter a number 9
Enter a number 3
Enter a number 5
Enter a number 23
Enter a number 23
Enter current Depth: 2
Enter Node Index: 2
The optimal value is:9
```

```
Please Enter number of indexes8
Enter a number 12
Enter a number 5
Enter a number 2
Enter a number 2
Enter a number 3
Enter a number 34
Enter a number 23
Enter a number 4
Enter current Depth: 2
Enter Node Index: 2
The optimal value is:23
```