

EXPERIMENT – 27

Write a python program to implement MIN MAX Search

Code:

```
# A simple Python3 program to find
# maximum score that
# maximizing player can get
import math

def minimax (curDepth, nodeIndex,
            maxTurn, scores,
            targetDepth):

    # base case : targetDepth reached
    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))

# Driver code
scores = [3, 5, 2, 9, 12, 5, 23, 23]
```

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

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

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

Output:

```
The optimal value is : 12
```

```
...Program finished with exit code 0
```

```
Press ENTER to exit console. 
```