

Code:

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#include <stdio.h>
#include <limits.h>

// Function to find the maximum of two numbers
int max(int a, int b) {
    return (a > b) ? a : b;
}

// Function to find the minimum of two numbers
int min(int a, int b) {
    return (a < b) ? a : b;
}

// Minimax function
int minimax(int depth, int nodeIndex, int isMax, int scores[], int h) {
    // If we reach the leaf node
    if (depth == h)
        return scores[nodeIndex];

    // If current move is of maximizer
    if (isMax)
        return max(
            minimax(depth + 1, nodeIndex * 2, 0, scores, h),
            minimax(depth + 1, nodeIndex * 2 + 1, 0, scores, h)
        );
    else // Minimizer's move
        return min(
            minimax(depth + 1, nodeIndex * 2, 1, scores, h),
            minimax(depth + 1, nodeIndex * 2 + 1, 1, scores, h)
        );
}
```

```
}
```

```
// Function to calculate log base 2
int log2int(int n){
    int r = 0;
    while (n > 1) {
        n /= 2;
        r++;
    }
    return r;
}

int main() {
    // Example leaf nodes (scores)
    int scores[] = {3, 5, 2, 9};
    int n = sizeof(scores)/sizeof(scores[0]);
    int h = log2int(n);

    int result = minimax(0, 0, 1, scores, h);
    printf("The optimal value is : %d\n", result);
    return 0;
}
```

OUTPUT:

The optimal value is : 5