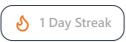
9/6/25, 12:39 PM NamasteDev

Interview Practice New

Courses

Join Community





Sum of odd numbers in array using Recursion

Problem Statement:

Write a recursive function sum(n) that calculates the sum of all odd numbers in an array arr up to index n.

Example:

Input: [5, 2, 6, 1, 3]

Odd Numbers: 5, 1, 3

Output: 9

Concepts:

Recursion: Repeatedly check whether <code>arr[n]</code> is **odd**, and add it only if true true.

Base Case: If n == 0, return arr[0] if it's **odd**, otherwise 0.

Recursive Case: Return (arr[n] if odd) + sum(n - 1).

Approach:

Check if arr[n] is **odd**.

If yes, add it to recursive result of sum(n-1).

Else, skip it and continue **recursion**.

Time & Space Complexity:

Time Complexity: O(n)

Space Complexity: O(n) recursive call stack

9/6/25, 12:39 PM NamasteDev

```
JavaScript Python Java C++ C C#
```

```
let arr = [5, 2, 6, 1, 3];
function sum(n) {
    let isOdd = arr[n] % 2 !== 0;
    if (n === 0) return isOdd ? arr[0] : 0;
    return (isOdd ? arr[n] : 0) + sum(n - 1);
}
console.log(sum(arr.length - 1)); // Output: 9
```

Video Course Discuss doubts Contribute Certificate

Sum of odd numbers in array using Recursion - DSA Notes

Sum of odd numbers in array using Recursion