

Problem No: 10

Problem Name: Write a c program to find the sum of an array using recursion.

Input	Output
3	
2 3 4	9

Source Code:

```
#include <stdio.h>

int arraySum(int arr[], int size) {

    if (size == 0) {
        return 0;
    }
    return arr[size - 1] + arraySum(arr, size - 1);
}

int main() {
    int size;
    scanf("%d", &size);
    int arr[size];
    for (int i = 0; i < size; i++) {
        scanf("%d", &arr[i]);
    }
    printf("%d\n", arraySum(arr, size));

    return 0;
}
```

Result and Analysis:

In subfunction the array is returned to the subfunction itself to sum the array elements.

In the main function user must input the size of the array and enter the elements using space. The subfunction will be called in the main function and show the sum of the elements.