// Austin Faulkner 20, 2020

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Write a function that accepts an array of integers and a number indicating the

number of elements as arguments. The function should recursively calculate the

sum of all the numbers in the array. Demonstrate the function in a driver

program.

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#include <iostream>

**int recurArraySum(int [], int);**

int main() {

int num\_elements = 0;

int \*sum = 0;

std::cout << "This program sums an array's elements, recursively."

<< std::endl;

std::cout << "Enter the size of the array you'd like to sum over: ";

std::cin >> num\_elements;

auto intArray = new int[num\_elements] ();

for (int i = 1; i <= num\_elements; ++i)

{

intArray[i] = i;

}

std::cout << "Sum: " << **recurArraySum(intArray, num\_elements);**

delete [] intArray;

return 0;

}

**int recurArraySum(int arr[], int num)**

**{**

**if (num <= 0)**

**return 0;**

**else**

**return recurArraySum(arr, num - 1) + arr[num];**

**}**

/Users/austinriemannfaulkner/CLionProjects/RecursivelySumArray/cmake-build-debug/RecursivelySumArray

This program sums an array's elements, recursively.

Enter the size of the array you'd like to sum over: 100

Sum: 5050

Process finished with exit code 0