Given an integer array nums, find the subarray with the largest sum, and return its sum.

CODE:

import java.util.Scanner;

public class MaximumSubarraySum1 {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

// Input the array size and elements

System.out.print("Enter the size of the array: ");

int size = scanner.nextInt();

int[] nums = new int[size];

System.out.println("Enter the elements of the array:");

for (int i = 0; i < size; i++) {

nums[i] = scanner.nextInt();

}

// Find the maximum subarray sum

int maxSubarraySum = maxSubArray(nums);

// Display the maximum subarray sum

System.out.println("Maximum subarray sum: " + maxSubarraySum);

scanner.close(); // Closing the scanner object

}

public static int maxSubArray(int[] nums) {

int maxSum = nums[0];

int currentSum = nums[0];

for (int i = 1; i < nums.length; i++) {

// Choose between extending the subarray or starting a new subarray

currentSum = Math.max(nums[i], currentSum + nums[i]);

// Update the maximum sum found so far

maxSum = Math.max(maxSum, currentSum);

}

return maxSum;

}

}

OUTPUT:

C:\javap>javac MaximumSubarraySum1.java

C:\javap>java MaximumSubarraySum

Enter the length of the array: 6

Enter the elements of the array:

3 5 2 4 90

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The sum of the largest subarray is: 108

