# Experiment-2

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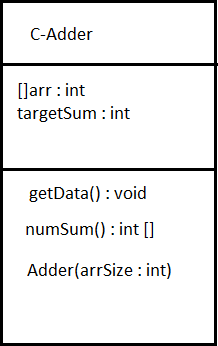
**Batch: AI-B2 Branch: AI Roll No 37**

**Problem Statement**

There is a class Adder which has two data members of type 1D int array and int variable. It has two functions: getdata and numsum. Function getdata accepts non-empty array of distinct integers from user in 1D int array data member and a targetsum in another data member.

The function numsum adds any two elements from an input array which is equal to targetsum and return an array of resulting two elements, in any order. If no two numbers sum up to the target sum, the function should return an empty array.

Note that the target sum is to be obtained by summing two different integers in the array; you can’t add a single integer to itself in order to obtain the target sum. You can assume that there will be at most one pair of numbers summing up to the target sum. Use constructor. Use extra variables if needed.



# Sample Input and Output Test Case 1

|  |  |  |
| --- | --- | --- |
| **Input**  **Parameters** | **Values** | **Expected Output** |
| 1D Array | [3,5,-4,8,11,1,-1,7] | [8,7] |
| targetsum | 15 |

**Test Case 2**

|  |  |  |
| --- | --- | --- |
| **Input**  **Parameters** | **Values** | **Expected Output** |
| 1D Array | [3,5,-4,8,11,1,-1,6] | [ ] |
| targetsum | 15 |

import java.util.Arrays;  
import java.util.Scanner;  
  
class Adder {  
 Scanner input = new Scanner(System.*in*);  
 private int[] arr;  
 private int targetSum;  
 public int arrayLength;  
  
 public Adder(int arrayLength){  
 this.arr = new int[arrayLength];  
 this.arrayLength = arrayLength;  
 }  
  
 public String getData() {  
 System.*out*.print("Enter Elements of Array : ");  
 for (int i = 0; i < arrayLength; i++) {  
 this.arr[i] = input.nextInt();  
 }  
 for (int i = 0; i < arrayLength; i++) {  
 for (int j = 0; j < arrayLength; j++) {  
 if (i != j && this.arr[i] == this.arr[j]) return "Wrong Input";  
 }  
 }  
 System.*out*.print("Enter target sum : ");  
 this.targetSum = input.nextInt();  
 return "Input Accepted";  
 }  
  
 public int[] numSum(int[] arr, int targetSum) {  
 int[] ans = new int[2];  
 for (int i = 0; i < arrayLength; i++) {  
 for (int j = i + 1; j < arrayLength; j++) {  
 if (arr[i] + arr[j] == targetSum) {  
 ans[0] = arr[i];  
 ans[1] = arr[j];  
 return ans;  
 }  
 }  
 }  
 return ans;  
 }  
  
 public void output() {  
 if (getData().equals("Input Accepted")){  
 System.*out*.println(Arrays.*toString*(numSum(arr, targetSum)));  
 }else{  
 System.*out*.println("Wrong Input");  
 }  
 }  
}  
  
public class Tester {  
 public static void main(String[] args) {  
 Scanner in = new Scanner(System.*in*);  
 System.*out*.print("Enter length of array : ");  
 int arrayLength = in.nextInt();  
 Adder obj1 = new Adder(arrayLength);  
 obj1.output();  
 }  
}

**Results:**

**Actual Output**

**Enter length of array : 7**

**Enter Elements of Array : 3 5 -4 8 11 1 -1**

**Enter target sum : 4**

**[3, 1]**