

WEEK 07

1. Sunny and Johnny like to pool their money and go to the ice cream parlor. Johnny never buys the same flavor that Sunny does. The only other rule they have is that they spend all of their money. Given a list of prices for the flavors of ice cream, select the two that will cost all of the money they have. Complete the code in the editor below. It should return an array containing the indices of the prices of the two flavors they buy, sorted ascending.

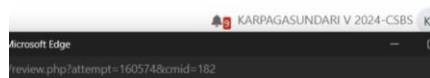
Input Format:

The first line contains an integer, t , denoting the number of trips to the ice cream parlor. The next t sets of lines each describe a visit. Each trip is described as follows:

1. The integer m , the amount of money they have pooled.
2. The integer n , the number of flavors offered at the time.
3. n space-separated integers denoting the cost of each flavor: $\text{cost}[\text{cost}[1], \text{cost}[2], \dots, \text{cost}[n]]$.

Output Format: For each test case, print two space-separated integers denoting the indices of the two flavors purchased, in ascending order.

Problem:



```
1 #include<stdio.h>
2 int main(){
3     int t;
4     scanf("%d", &t);
5     for(int w=0; w<t; w++){
6         int m,n;
7         scanf("%d%d", &m, &n);
8         int arr[n];
9         for(int i=0;i<n;i++){
10             scanf("%d", &arr[i]);
11         }
12         for(int i=0;i<n;i++){
13             for(int j=i;j<n;j++){
14                 if (arr[i] + arr[j] == m){
15                     printf("%d %d\n", i+1, j+1);
16                     break;
17                 }
18             }
19         }
20     }
21     return 0;
22 }
```

Input	Expected	Got
✓ 2	1 4	1 4 ✓
4	1 2	1 2 ✓
5		
1 4 5 3 2		
4		
4		
2 2 4 3		

Passed all tests! ✓

2. Numeros the Artist had two lists that were permutations of one another. He was very proud. Unfortunately, while transporting them from one exhibition to another, some numbers were lost out of the first list. Can you find the missing numbers

Input Format:

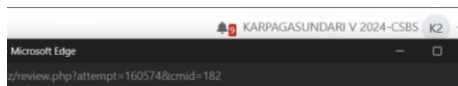
There will be four lines of input:

n - the size of the first list, **arr**.The next line contains **n** space-separated integers **arr[i]**,**m** - the size of the second list, **brr**.The next line contains **m** space-separated integers **brr[i]**

Output Format:

Output the missing numbers in ascending order.

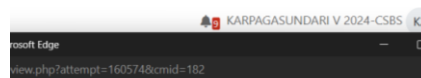
Problem:



```

1 #include<stdio.h>
2 void sort(int arr[], int n){
3     for(int i=0; i<n;i++){
4         for(int j=i;j<n;j++){
5             if(arr[i] > arr[j]){
6                 int temp = arr[i];
7                 arr[i] = arr[j];
8                 arr[j] = temp;
9             }
10        }
11    }
12 }
13 int main(){
14     int n,m;
15     scanf("%d", &n);
16     int arr[n];
17     for(int i=0;i<n;i++){
18         scanf("%d", &arr[i]);
19     }
20 }
21 scanf("%d", &m);
22 int brr[m];
23 for(int i=0;i<m; i++){
24     scanf("%d", &brr[i]);
25 }
26 int arr_2[m-n];
27 sort(arr,n);
28 sort(brr,m);
29 int a=0, b=0,c=0;
30 while (a<n){
31     if(arr[a] != brr[b]){
32         arr_2[c] = arr[a];

```



```

33     c++;
34 }
35 else{
36     a++;
37     b++;
38 }
39 }
40 for(int i=0; i<m-n;i++){
41     printf("%d ",arr_2[i]);
42 }
43 return 0;
44 }
45

```

Output:

	Input	Expected	Got	
✓	10 203 204 205 206 207 208 203 204 205 206 13 203 204 204 205 206 207 205 208 203 206 205 206 204	204 205 206	204 205 206	✓

Passed all tests! ✓

3. Watson gives Sherlock an array of integers. His challenge is to find an element of the array such that the sum of all elements to the left is equal to the sum of all elements to the right. For instance, given the array $arr = [5, 6, 8, 11]$, 8 is between two subarrays that sum to 11. If your starting array is $[1]$, that element satisfies the rule as left and right sum to 0. You will be given arrays of integers and must determine whether there is an element that meets the criterion. Complete the code in the editor below. It should return a string, either YES if there is an element meeting the criterion or NO otherwise. It has the following:

- arr:** an array of integers

Input Format:

The first line contains T , the number of test cases.

The next T pairs of lines each represent a test case.

- The first line contains n , the number of elements in the array arr .
- The second line contains n space-separated integers $arr[i]$ where $0 \leq i < n$.

Output Format:

For each test case print YES if there exists an element in the array, such that the sum of the

elements on its left is equal to the sum of the elements on its right; otherwise print NO.

Problem:

Microsoft Edge

/review.php?attempt=160574&cmid=182

```
1 #include<stdio.h>
2 int main(){
3     int t;
4     scanf("%d", &t);
5     for(int w=0;w<t;w++){
6         int n;
7         scanf("%d", &n);
8         int arr[n];
9         for(int i =0; i<n; i++){
10             scanf("%d", &arr[i]);
11         }
12         int f=0, b=n-1, c=0, sum_f=0, sum_b=arr[b];
13         while (f<b-1){
14             if(sum_f < sum_b){
15                 sum_f += arr[f];
16                 f++;
17             }
18             else if(sum_f>sum_b){
19                 sum_b += arr[b];
20                 b--;
21             }
22             if(sum_f == sum_b){
23                 c++;
24                 break;
25             }
26         }
27         if (c){
28             printf("YES\n");
29         }
30         else{
31             printf("NO\n");
32         }
33     }
```

Output:

	Input	Expected	Got	
✓	3	YES	YES	✓
	5	YES	YES	
	1 1 4 1 1	YES	YES	
	4			
	2 0 0 0			
	4			
	0 0 2 0			
✓	2	NO	NO	✓
	3	YES	YES	
	1 2 3			
	4			
	1 2 3 3			

Passed all tests! ✓