

# Hash Tables: Ice Cream Parlor



Each time Sunny and Johnny take a trip to the Ice Cream Parlor, they pool their money to buy ice cream. On any given day, the parlor offers a line of flavors. Each flavor has a cost associated with it.

Given the value of *money* and the *cost* of each flavor for *t* trips to the Ice Cream Parlor, help Sunny and Johnny choose two *distinct* flavors such that they spend their entire pool of money during each visit. ID numbers are the 1-based index number associated with a *cost*. For each trip to the parlor, print the ID numbers for the two types of ice cream that Sunny and Johnny purchase as two space-separated integers on a new line. You must print the smaller ID first and the larger ID second.

For example, there are  $n = 5$  flavors having  $cost = [2, 1, 3, 5, 6]$ . Together they have  $money = 5$  to spend. They would purchase flavor ID's 1 and 3 for a cost of  $2 + 3 = 5$ . Use 1 based indexing for your response.

**Note:** Two ice creams having unique IDs *i* and *j* may have the same cost (i.e.,  $cost[i] \equiv cost[j]$ ).

## Function Description

Complete the function *whatFlavors* in the editor below. It must determine the two flavors they will purchase and print them as two space-separated integers on a line.

*whatFlavors* has the following parameter(s):

- *cost*: an array of integers representing price for a flavor
- *money*: an integer representing the amount of money they have to spend

## Input Format

The first line contains an integer, *t*, the number of trips to the ice cream parlor.

Each of the next *t* sets of 3 lines is as follows:

- The first line contains *money*.
- The second line contains an integer, *n*, the size of the array *cost*.
- The third line contains *n* space-separated integers denoting the  $cost[i]$ .

## Constraints

- $1 \leq t \leq 50$
- $2 \leq money \leq 10^9$
- $2 \leq n \leq 5 * 10^4$
- $1 \leq cost[i] \leq 10^9$
- There will always be a unique solution.

## Output Format

Print two space-separated integers denoting the respective indices for the two distinct flavors they choose to purchase in ascending order. Recall that each ice cream flavor has a unique ID number in the inclusive range from 1 to  $|cost|$ .

## Sample Input

```
2
4
5
1 4 5 3 2
4
4
2 2 4 3
```

### Sample Output

```
1 4
1 2
```

### Explanation

Sunny and Johnny make the following two trips to the parlor:

1. The first time, they pool together *money* = 4 dollars. There are five flavors available that day and flavors 1 and 4 have a total cost of  $1 + 3 = 4$ .
2. The second time, they pool together *money* = 4 dollars. There are four flavors available that day and flavors 1 and 2 have a total cost of  $2 + 2 = 4$ .