Bill Division ☆

Editorial by shashank21j

The value of $b_{charged}$ is equal to b_{actual} when item k is subtracted from the total cost of the bill before it's divided in half.

$$b_{actual} = \frac{\left(\sum_{i=0}^{n-1} bill[i]\right) - bill[k]}{2}$$

If $b_{charged} = b_{actual}$, then Brian did not overcharge Anna and we print `Bon Appetit`; otherwise, we print the value of $b_{charged} - b_{actual}$.

Solutions

Python 2

```
n, k = map(int, raw_input().split())
bill = map(int, raw_input().split())
val = input()
t = val - (sum(bill) - bill[k]) / 2
if (t == 0):
    print "Bon Appetit"
else:
    print t
```

Set by shashank21j

Problem Setter's code:

Python 2

```
n, k = map(int, raw_input().split())
bill = map(int, raw_input().split())
val = input()
t = val - (sum(bill) - bill[k])/2
if (t == 0):
    print "Bon Appetit"
else:
    assert val == sum(bill)/2
    print t
```

Tested by AllisonP

Problem Tester's code:

Java

```
import java.util.*;

class Solution {
    public static void bonAppetit(int[] cost, int k, int charged) {
        int total = (charged << 1);

        for (int i : cost) {
            total = total - i;
        }

        System.out.println( (total >= 0) ? cost[k] / 2 : "Bon Appetit");
    }

    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
```

STATISTICS

Difficulty:	Easy
Time Complexity:	O(n)
Required Knowledge:	Logic
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Originally featured in World CodeSprint 6

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```
        int n = scan.nextInt();
        int k = scan.nextInt();
        int[] cost = new int[n];
        for (int i = 0; i < n; i++) {
            cost[i] = scan.nextInt();
        }
        int charged = scan.nextInt();
        scan.close();

        bonAppetit(cost, k, charged);
    }
}
```

C Sharp

```
using System;
using System.Collections.Generic;
using System.IO;
using System.Linq;

class Solution {
    static void Main(String[] args) {
        int K = Console.ReadLine().Split(' ').Select(Int32.Parse).ToArray()[1];

        List<int> ItemList = Console.ReadLine().Split(' ').Select(Int32.Parse).ToList();
        long CorrectTotal = (ItemList.Sum(m => m) - ItemList[K]) / 2;
        long AmountCharged = Convert.ToUInt32(Console.ReadLine());

        if (CorrectTotal == AmountCharged)
            Console.WriteLine("Bon Appetit");
        else {
            Console.WriteLine(AmountCharged - CorrectTotal);
        }
    }
}
```

Feedback

Was this editorial helpful?

Yes No