



## Comp 130 - Introduction to Programming (Java)

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### Task: BalanceIndex

**Description:** Write a program that finds the balance index of an array where balanced index  $i$  is defined as the first position where the left sum is equal to the right sum. You are asked to find the smallest  $i$  such that

$$a[0] + a[1] + \dots + a[i] == a[i+1] + a[i+2] + \dots + a[ARRAY\_SIZE]$$

If no balance index exists, your program should return -1.

Note that your program should fill all the elements of array with random integers in range  $[0-2]$ .

### Sample Run 1:

```
BalanceIndex
1 1 2 0 1 1 0 0 1 0 0 1 1 0 1 2 0 1 2 0 0 2 0 0 2 0 0 1 2 1 0 2 2 0 0 0 2 1 0
Balance Index: 19
```

### Sample Run 2:

```
BalanceIndex
0 2 2 0 0 1 0 1 1 0 1 2 0 1 2 2 1 0 0 2 1 1 1 1 1 2 0 0 2 2 2 0 1 0 2 1 2 2 0 1
No balance index exists
```