

2. JavaScript: Step Counter

In this challenge, you are provided with the implementation of a simple counter object:

```
const counter = (function counter() {  
  let value = 0;  
  return {  
    getValue: function() {  
      return value;  
    },  
    changeBy: function(k) {  
      value += k;  
    },  
  }  
})();
```

Your task is to implement a function *stepCounter* that:

- takes a single parameter k
- returns a new object, representing a step counter with the initial value of 0 and with three methods:
 - `increment()` : increments the current value by k
 - `decrement()` : decrements the current value by k
 - `getValue()` : returns the current value

Your implementation must encapsulate the provided counter object and use it for its implementation. The object returned by *stepCounter* must not have a *changeBy* property.

Your implementation of the function will be tested by a provided code stub on several input files. Each input file contains a parameter for *stepCounter*, followed by several values denoting the operations to perform on the object returned by *stepCounter*. The results of performing the operations will be printed to the standard output by the provided code.

▼ Input Format Format for Custom Testing

In the first line, there is a single integer, k denoting the parameter for the *stepCounter* function.

In the second line, there is integer, n , denoting the number of operations to perform.

Next, n lines follow. Each of them contains a single character, either $+$, $-$, or $?$ denoting respectively calling the `increment()`, `decrement()`, and `getValue()` methods on the object returned by *stepCounter*.

▼ Sample Case 0

Sample Input

STDIN	Function
1	→ parameter $k = 1$
4	→ number of operations, $n = 1$
+	→ <code>increment()</code>
?	→ <code>getValue()</code>
-	→ <code>decrement()</code>
?	→ <code>getValue()</code>

Sample Output

```
1  
0
```

Explanation

In this test, the k parameter for *stepCounter* is 1, so each *increment* must increment the value by 1 and each *decrement* must decrement the value by 1. Initially, the counter has the value 0. There are 4 operations to be performed. The first of them increments the counter, so it has the value 1 now. The second prints the current value of the counter. The third decrements the counter, so it has the value 0 now. The fourth prints the current value of the counter.

▼ Sample Case 1

Sample Input

STDIN	Function
2	→ parameter k = 2
5	→ number of operations, n = 5
-	→ decrement()
?	→ getValue()
+	→ increment()
+	→ increment()
?	→ getValue()

Sample Output

```
-2
2
```

Explanation

In this test, the k parameter for `stepCounter` is 2, so each *increment* must increment the value by 2 and each *decrement* must decrement the value by 2. Initially, the counter has the value 0. There are 5 operations to be performed. The first of them decrements the counter, so it has the value -2 now. The second prints the current value of the counter. The third increments the counter, so it has the value 0 now. The fourth increments the counter, so it has the value 2 now. The fifth prints the current value of the counter.