thle01 👤

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⭕ BJP4 Exercise 7.2: range

Language/Type: ☕ Java arrays
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Write a static method named range that takes an array of integers as a parameter and returns the range of values contained in the array. The range of an array is defined to be one more than the difference between its largest and smallest element. For example, if the largest element in the array is 15 and the smallest is 4, the range is 12. If the largest and smallest values are the same, the range is 1.

The following table shows some calls to your method and their results (the largest and smallest values are underlined):

Call	Value Returned
`int[] a1 = {8, 3, 5, 7, 2, 4};`	`range(a1) returns  7`
`int[] a2 = {15, 22, 8, 19, 31};`	`range(a2) returns 24`
`int[] a3 = {3, 10000000, 5, -29, 4};`	`range(a3) returns 10000030`
`int[] a4 = {100, 5};`	`range(a4) returns 96`
`int[] a5 = {32};`	`range(a5) returns  1`

You may assume that the array contains at least one element (that its length is at least 1). You should not make any assumptions about the values of the particular elements in the array; they could be extremely large, very small, etc. You should not modify the contents of the array.

Type your solution here:

```java
public static int range(int[] a) {
    int n = 0, min = a[0], max = a[0];
    for (int i = 0; i <= a.length - 1; i++) {
        if (a[i] > max)
```

```
 5              max = a[i];
 6          if (a[i] < min)
 7              min = a[i];
 8      }
 9      n = max - min + 1;
10      return n;
11 }
```

This is a **method problem.** Write a Java method as described. Do not write a complete program or class; just the method(s) above.

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test #1:	range({8, 3, 5, 7, 2, 4})
return:	7
result:	✅ pass
test #2:	range({15, 22, 8, 19, 31})
return:	24
result:	✅ pass
test #3:	range({3, 10000000, 5, -29, 4})
return:	10000030
result:	✅ pass
test #4:	range({100, 5})
return:	96
result:	✅ pass
test #5:	range({32})
return:	1
result:	✅ pass

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