5402. Longest Continuous Subarray With Absolute Diff Less Than or Equal to Limit

ly-contest-187/problems/longest-continuous-subarray-with-absolute-diff-less-than-or-equal-to-limit/submissions/)

y-contest-187/)

Given an array of integers `nums` and an integer `limit`, return the size of the longest continuous subarray such that the absolute difference between any two elements is less than or equal to `limit`.

In case there is no subarray satisfying the given condition return 0.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:

```
Input: nums = [8,2,4,7], limit = 4
Output: 2
Explanation: All subarrays are:
[8] with maximum absolute diff |8−8| = 0 <= 4.
[8,2] with maximum absolute diff |8−2| = 6 > 4.
[8,2,4] with maximum absolute diff |8−2| = 6 > 4.
[8,2,4,7] with maximum absolute diff |8−2| = 6 > 4.
[2] with maximum absolute diff |2−2| = 0 <= 4.
[2,4] with maximum absolute diff |2−4| = 2 <= 4.
[2,4,7] with maximum absolute diff |2−7| = 5 > 4.
[4] with maximum absolute diff |4−4| = 0 <= 4.
[4,7] with maximum absolute diff |4−7| = 3 <= 4.
[7] with maximum absolute diff |7−7| = 0 <= 4.
Therefore, the size of the longest subarray is 2.
```

Example 2:

```
Input: nums = [10,1,2,4,7,2], limit = 5
Output: 4
Explanation: The subarray [2,4,7,2] is the longest since the maximum absolute diff is |2−7
```

Example 3:

```
Input: nums = [4,2,2,2,4,4,2,2], limit = 0
Output: 3
```

Constraints:

- `1 <= nums.length <= 10^5`
- `1 <= nums[i] <= 10^9`

- 0 <= limit <= 10^9

JavaScript   ▾   ⟨/⟩   ⟳   ⚙

```javascript
 1 ▾ /**
 2    * @param {number[]} nums
 3    * @param {number} limit
 4    * @return {number}
 5    */
 6 ▾ const longestSubarray = (nums, limit) => {
 7       let allSubArr = getAllSubArr(nums);
 8       let allLength = [];
 9 ▾     for (const eachSubArr of allSubArr) {
10           let difference = Math.abs(getMaxArr(eachSubArr) -
      getMinArr(eachSubArr));
11 ▾         if (difference <= limit) {
12               allLength.push(eachSubArr.length);
13           }
14       }
15       return getMaxArr(allLength);
16 };
17
18 ▾ const getAllSubArr = (arr) => {
19       let result = [];
20 ▾     for (let i = 0; i < arr.length; i++) {
21 ▾         for (let j = i; j < arr.length; j++) {
22               result.push(arr.slice(i, j + 1));
23           }
24       }
25       return result;
26 };
27
28 ▾ const getMinArr = (arr) => {
29       let min = arr[0];
30       for (i = 1; i < arr.length; i++)
31           if (arr[i] < min)
32               min = arr[i];
33       return min;
34 };
35
36 ▾ const getMaxArr = (arr) => {
37       let max = arr[0];
38       for (i = 1; i < arr.length; i++)
39           if (arr[i] > max)
40               max = arr[i];
41       return max;
42 };
```

☐ **Custom Testcase**   (Use Example Testcases)

⏺ Run   ☁ Submit

Submission Result: Runtime Error (/submissions/detail/333571637/)

More Details ❯ (/submissions/detail/333571637/)

```
Runtime Error Message:   FATAL ERROR: Scavenger: semi-space copy Allocation f…
                         FATAL ERROR: Scavenger: semi-space copy Allocation f…
                          1: 0x8db900 node::Abort() [nodejs run]
                          2: 0x8db94c  [nodejs run]
                          3: 0xad6c1e v8::Utils::ReportOOMFailure(v8::interna…
                          1: 0x8db900 node::Abort() [nodejs run]
                          2: 0x8db94c  [nodejs run]
                          3: 0xad6c1e v8::Utils::ReportOOMFailure(v8::interna…
                          4: 0xad6e54 v8::internal::V8::FatalProcessOutOfMemo…
                          5: 0xec44e2  [nodejs run]
                          6: 0xf0e275  [nodejs run]
                          4: 0xad6e54 v8::internal::V8::FatalProcessOutOfMemo…
                          7: 0xf0f7cc void v8::internal::BodyDescriptorBase::…
                          5: 0xec44e2  [nodejs run]
                          6: 0xf0e275  [nodejs run]
                          7: 0xf0ede0  [nodejs run]
                          8: 0xf11d34 v8::internal::Scavenger::Process(v8::in…
                          9: 0xeb85f3 v8::internal::ScavengingTask::RunInPara…
                         10: 0xedfd0f v8::internal::ItemParallelJob::Task::Ru…
                          8: 0xf0fb48 void v8::internal::BodyDescriptorBase::…
                          9: 0xf10d0e v8::internal::Scavenger::IterateAndScav…
                         10: 0xf1198a v8::internal::Scavenger::Process(v8::in…
                         11: 0xeb85f3 v8::internal::ScavengingTask::RunInPara…
                         12: 0xedfd0f v8::internal::ItemParallelJob::Task::Ru…
                         13: 0xbc7166 v8::internal::CancelableTask::Run() [no…
                         11: 0xbc7166 v8::internal::CancelableTask::Run() [no…
                         14: 0x9625b9  [nodejs run]
                         15: 0x7f3236aa76ba  [/lib/x86_64-linux-gnu/libpthrea…
                         16: 0x7f32367dd41d clone [/lib/x86_64-linux-gnu/libc…
                         12: 0x9625b9  [nodejs run]
                         13: 0x7f3236aa76ba  [/lib/x86_64-linux-gnu/libpthrea…
                         14: 0x7f32367dd41d clone [/lib/x86_64-linux-gnu/libc…

Last executed input:     [8952,1216,3953,6254,2285,4681,3317,6508,5847,2922,3…
                         9411

Stdout:
                         <--- Last few GCs --->

                         [31:0x44151a0]     1260 ms: Scavenge 359.0 (385.5) -
                         > 358.8 (396.0) MB, 14.3 / 0.0 ms  (average mu = 0.9
                         08  current mu = 0 904) allocation failure
```

08, current mu = 0.904) allocation failure
[31:0x44151a0]   1271 ms: Scavenge 369.4 (396.0) —
> 369.4 (401.0) MB, 8.5 / 0.0 ms (average mu = 0.90
8, current mu = 0.904) allocation failure
[31:0x44151a0]   1284 ms: Scavenge 374 2 (401 0) —

Run Code: Finished

Run Code Result: ✕

Your input

```
[8,2,4,7]
4
```

Your answer

```
2
```

Expected answer

```
2
```

[Show Diff]

Runtime: 96 ms

Note: is Run Code inconsistent with Submit Solution? If you are using global variables or C/C++, check this
(https://support.leetcode.com/hc/en-us/articles/360011834174-I-encountered-Wrong-Answer-Runtime-Error-for-a-
specific-test-case-When-I-test-my-code-using-this-test-case-it-produced-the-correct-output-Why-) out.