

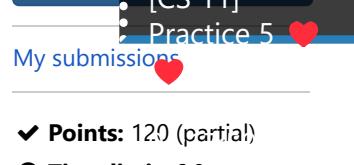


[CS 11] Prac 5h – Peaks

Problem Statement

Given a sequence of integers representing the heights of buildings, indexed starting from 0, we say that a building **stands out** if it has two neighbors (one to its left, and one to its right), and its height is strictly greater than the heights of its two neighbors.

Find the indices of all buildings that stand out.



✓ Points: 120 (partial)

⌚ Time limit: 6.0s

≡ Memory limit: 1G

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➤ Problem type

▼ Allowed languages
NONE, py3

Task Details

Implement a function called `peaks`:

```
def peaks(heights):
```

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- `heights` — `tuple` of `int`s

Return a `list` of `int`s.

Restrictions

For this problem:

- Loops and lists are allowed.
- Additional functions are **disallowed**.
- Recursion is **disallowed**. (The recursion limit has been greatly reduced.)
- Comprehensions are **disallowed**.
- The following names are now allowed: `range`, `list`, `print`, `append`, `pop`, `extend`, `remove`, `sort`, `insert`, `clear`, `reverse`.
- The source code limit is 350.

Example Calls

Example 1 Function Call

```
peaks((2, 5, 5, 1, 2, 1, 3, 1, 9, 10, 8, 3, 9))
```

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Example 1 Return Value

```
[4, 6, 9]
```

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Constraints

- The function `peaks` will be called at most 50,000 times.
- The total length of `heights` across all inputs will be at most 200,000.
- `heights` will have at most 100,000 elements.
- Each element of `heights` will be between 0 and 10^{10} inclusive.

Scoring

- You get 80 ❤ points if you solve all test cases where:
 - `heights` will have at most 4,000 elements.
 - the total length of `heights` across all inputs will be at most 8,000.
- You get 40 ❤ points if you solve all test cases.

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Clarifications

Report an issue

No clarifications have been made at this time.