

@LeetCode

You are a product manager and currently leading a team to develop a new product. Unfortunately, the latest version of your product fails the quality check. Since each version is developed based on the previous version, all the versions after a bad version are also bad.

Suppose you have n versions $[1, 2, \dots, n]$ and you want to find out the first bad one, which causes all the following ones to be bad.

You are given an API `bool isBadVersion(version)` which will return whether `version` is bad. Implement a function to find the first bad version. You should minimize the number of calls to the API.

Example:

Given $n = 5$, and version = 4 is the first bad version.

```
call isBadVersion(3) -> false
```

```
call isBadVersion(5) -> true
```

```
call isBadVersion(4) -> true
```

Then 4 is the first bad version.