Problem 2396: Strictly Palindromic Number

Problem Information

Difficulty: Medium
Acceptance Rate: 89.78%
Paid Only: No
Tags: Math, Two Pointers, Brainteaser

Problem Description

An integer `n` is **strictly palindromic** if, for **every** base `b` between `2` and `n - 2` (**inclusive**), the string representation of the integer `n` in base `b` is **palindromic**.

Given an integer `n`, return `true` _if_ `n` _is**strictly palindromic** and _`false` _otherwise_.

A string is **palindromic** if it reads the same forward and backward.

Example 1:

Input: n = 9 **Output:** false **Explanation:** In base 2: 9 = 1001 (base 2), which is palindromic. In base 3: 9 = 100 (base 3), which is not palindromic. Therefore, 9 is not strictly palindromic so we return false. Note that in bases 4, 5, 6, and 7, n = 9 is also not palindromic.

Example 2:

Input: n = 4 **Output:** false **Explanation:** We only consider base 2: 4 = 100 (base 2), which is not palindromic. Therefore, we return false.

Constraints:

* `4 <= n <= 105`

Code Snippets

C++:

```
class Solution {
public:
bool isStrictlyPalindromic(int n) {

}
};
```

Java:

```
class Solution {
public boolean isStrictlyPalindromic(int n) {

}
}
```

Python3:

```
class Solution:
def isStrictlyPalindromic(self, n: int) -> bool:
```