2417. Closest Fair Integer Premium

Medium | Topics | Hint

You are given a **positive** integer `n`.

We call an integer `k` fair if the number of **even** digits in `k` is equal to the number of **odd** digits in it.

Return *the **smallest** fair integer that is **greater than or equal** to* `n`.

Example 1:

```
Input: n = 2
Output: 10
Explanation: The smallest fair integer that is greater than or equal to 2 is 10.
10 is fair because it has an equal number of even and odd digits (one odd digit and one even digit).
```

Example 2:

```
Input: n = 403
Output: 1001
Explanation: The smallest fair integer that is greater than or equal to 403 is 1001.
1001 is fair because it has an equal number of even and odd digits (two odd digits and two even digits).
```

Constraints:

- $1 <= n <= 10^9$

Seen this question in a real interview before? 1/5

Yes No

Accepted 1.2K | Submissions 2.6K | Acceptance Rate 45.2%

Topics

Math Enumeration

Hint 1

Suppose that the number that we are looking for has the same number of digits as n, the answer, in this case, will not be very far from n, so you can do a simple brute force. Can you prove why this is true?

Hint 2

How do you handle the case when the resulting number has more digits than n?

Discussion (0)