

1116. Print Zero Even Odd

Description

You have a function `printNumber` that can be called with an integer parameter and prints it to the console.

- For example, calling `printNumber(7)` prints `7` to the console.

You are given an instance of the class `ZeroEvenOdd` that has three functions: `zero`, `even`, and `odd`. The same instance of `ZeroEvenOdd` will be passed to three different threads:

- **Thread A:** calls `zero()` that should only output `0`'s.
- **Thread B:** calls `even()` that should only output even numbers.
- **Thread C:** calls `odd()` that should only output odd numbers.

Modify the given class to output the series `"010203040506..."` where the length of the series must be `2n`.

Implement the `ZeroEvenOdd` class:

- `ZeroEvenOdd(int n)` Initializes the object with the number `n` that represents the numbers that should be printed.
- `void zero(printNumber)` Calls `printNumber` to output one zero.
- `void even(printNumber)` Calls `printNumber` to output one even number.
- `void odd(printNumber)` Calls `printNumber` to output one odd number.

Example 1:

Input: `n = 2`
Output: `"0102"`
Explanation: There are three threads being fired asynchronously. One of them calls `zero()`, the other calls `even()`, and the last one calls `odd()`. `"0102"` is the correct output.

Example 2:

Input: `n = 5`
Output: `"0102030405"`

Constraints:

- `1 <= n <= 1000`

