

## Find Good Numbers

A number is termed as a “**GOOD NUMBER**” if meets the 2 criteria mentioned below;

- a. All the digits in the number must be only 1 or 2 or 3
- b. No two adjacent substrings of the number is same

Example for good numbers: 1, 121, 1213, 1213121

Example for bad numbers: 11, 1212, 1221, 1231231

11 is a bad number because 1 follows 1

Similarly 1212 is bad because the substring “12” is present adjacent to the substring “12”

1221 is a bad number because the substring “2” follows “2”

1231231 is a bad number because the substring “123” is adjacent to substring “123”

Design a python module to accept an input value N (which is a positive non-zero number). The algorithm must then find out the **smallest good number** which can be formed and has only N digits in it. The number must be displayed as output.

For Example – If the value on N entered by the user is 4

The smallest possible good number which can be formed having 4 digits is **1213**