

Championship Game Tiebreaker

Consider the following number:

$$N = 12004220033200242001 \dots 10021003$$

In this number N , the digit 1 is followed by 2004, then 2 is followed by 2003, then 3 is followed by 2002, and so on until 1002 is followed by 1003.

Determine the number of digits in N .