MAA Metro NY Section
Problem of the Month

February 2025
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List the positive integer palindromes in increasing order:

$$1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 22, 33, \ldots.$$

The *index* of the palindrome p is the positive integer i such that p is the ith palindrome. For example, the index of the palindrome 11 is 10. A *palindromic-index palindrome* is a palindrome whose index is also a palindrome. For example, 22 is a palindromic-index palindrome, since its index 11 is a palindrome. Moreover, 22 is the 10th palindromic-index palindrome. What is the 111th palindromic-index palindrome?

AI-generated solutions will not be accepted, but writing code is encouraged! Be sure to submit any code you wrote to solve this problem.

Solutions are due the last day of the month! Send your solution as a PDF file, accompanied by any references if applicable, to `maanyproblems@gmail.com`.

Problem of the month main page:

`http://sections.maa.org/metrony/problemofthemonth.html`