10001st prime

Problem 7 (https://projecteuler.net /problem=7)

By listing the first six prime numbers: 2, 3, 5, 7, 11, and 13, we can see that the 6th prime is 13.

What is the 10 001st prime number?

Solution

```
In [1]: n, q, p = 3, 1, [2]
        while len(p)<10001:
            for x in p:
                if x > q:
                    p.append(n)
                    break
                if n % x == 0:
                    break
            n += 2
            q = int(n ** 0.5)
        print(p[-1])
```

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