

Let us say $n = \text{fibonacci}(N)$ and $m = \text{fibonacci}(N - 1)$

$\text{fibonacci}(N) = \text{fibonacci}(N-1) + \text{fibonacci}(N-2)$

OR $n = m + k$ where $k < m$.

Therefore the step

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n = n % m will make n = k
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swap(n, m) will result in
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```
n = fibonacci(N-1)
```

```
m = k = fibonacci(N-2)
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So, it will take N steps before m becomes 0.

This means, in the worst case, this algorithm can take N step if n is N th fibonacci number.

Think of what's the relation between N and n .