

Python 语言与应用基础

K08 运行时间检测

运行截图：

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For number 1, the fibonacci number is 1 and the time required is 0.0000019 seconds
For number 2, the fibonacci number is 1 and the time required is 0.0000021 seconds
For number 3, the fibonacci number is 2 and the time required is 0.0000024 seconds
For number 4, the fibonacci number is 3 and the time required is 0.0000031 seconds
For number 5, the fibonacci number is 5 and the time required is 0.0000045 seconds
For number 6, the fibonacci number is 8 and the time required is 0.0000060 seconds
For number 7, the fibonacci number is 13 and the time required is 0.0000095 seconds
For number 8, the fibonacci number is 21 and the time required is 0.0000160 seconds
For number 9, the fibonacci number is 34 and the time required is 0.0000243 seconds
For number 10, the fibonacci number is 55 and the time required is 0.0000379 seconds
For number 11, the fibonacci number is 89 and the time required is 0.0000596 seconds
For number 12, the fibonacci number is 144 and the time required is 0.00020766 seconds
For number 13, the fibonacci number is 233 and the time required is 0.0001585 seconds
For number 14, the fibonacci number is 377 and the time required is 0.0002816 seconds
For number 15, the fibonacci number is 610 and the time required is 0.0008712 seconds
For number 16, the fibonacci number is 987 and the time required is 0.0006061 seconds
For number 17, the fibonacci number is 1597 and the time required is 0.0011339 seconds
For number 18, the fibonacci number is 2584 and the time required is 0.0019927 seconds
For number 19, the fibonacci number is 4181 and the time required is 0.0022624 seconds
For number 20, the fibonacci number is 6765 and the time required is 0.0033293 seconds
For number 21, the fibonacci number is 10946 and the time required is 0.0059032 seconds
For number 22, the fibonacci number is 17711 and the time required is 0.0090001 seconds
For number 23, the fibonacci number is 28657 and the time required is 0.0140896 seconds
For number 24, the fibonacci number is 46368 and the time required is 0.0211163 seconds
For number 25, the fibonacci number is 75025 and the time required is 0.0340650 seconds
For number 26, the fibonacci number is 121393 and the time required is 0.0543678 seconds
For number 27, the fibonacci number is 196418 and the time required is 0.0925162 seconds
For number 28, the fibonacci number is 317811 and the time required is 0.1476409 seconds
For number 29, the fibonacci number is 514229 and the time required is 0.2350078 seconds
For number 30, the fibonacci number is 832040 and the time required is 0.3796241 seconds
For number 31, the fibonacci number is 1346269 and the time required is 0.6129007 seconds
For number 32, the fibonacci number is 2178309 and the time required is 0.9852562 seconds
For number 33, the fibonacci number is 3524578 and the time required is 1.5896263 seconds
For number 34, the fibonacci number is 5702887 and the time required is 2.5770833 seconds
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描述：

从运行结果我们可以得知，当 fib(n)的 n 的值越来越大时，求得 fib(n)的答案所需的时间就越来越长（递增）。这是因为随着 n 的值增加，递归函数 fib 所需要调用的次数就越来越多，因此就需要更长的时间。

举个例子，当 n=17 时，运行时间是 0.0011339 秒，而当 n=18 时，运行时间是 0.0019927 秒。这是因为 n=18 比 n=17 多一个要求的数，递归函数的调用也因此增加。