

Python has a default limit of 1000 recursive calls, when we set the value of  $n$  to  $2^{10}$ , a total of 1024, this exceeded the limit of default recursive calls allowed.

```
➔ HOS /usr/local/bin/python3 "/Users/jocelynjeriah
/Documents/CityU/CS469 Data Structures & Algorithms
/HOS/cs469-hos03-fall-2024-luminousbeam/recursion/f
ibNumbers.py"
Traceback (most recent call last):
  File "/Users/jocelynjeriah/Documents/CityU/CS469 Data Structures & Algorithms/HOS/cs469-hos03-fall-2024-luminousbeam/recursion
/fibNumbers.py", line 10, in <module>
    print(fibonacci(n))
  File "/Users/jocelynjeriah/Documents/CityU/CS469 Data Structures & Algorithms/HOS/cs469-hos03-fall-2024-luminousbeam/recursion
/fibNumbers.py", line 5, in fibonacci
    return fibonacci(n-1) + fibonacci(n-2)
  File "/Users/jocelynjeriah/Documents/CityU/CS469 Data Structures & Algorithms/HOS/cs469-hos03-fall-2024-luminousbeam/recursion
/fibNumbers.py", line 5, in fibonacci
    return fibonacci(n-1) + fibonacci(n-2)
  File "/Users/jocelynjeriah/Documents/CityU/CS469 Data Structures & Algorithms/HOS/cs469-hos03-fall-2024-luminousbeam/recursion
/fibNumbers.py", line 5, in fibonacci
    return fibonacci(n-1) + fibonacci(n-2)
  [Previous line repeated 995 more times]
  File "/Users/jocelynjeriah/Documents/CityU/CS469 Data Structures & Algorithms/HOS/cs469-hos03-fall-2024-luminousbeam/recursion
/fibNumbers.py", line 3, in fibonacci
    if n == 0 or n==1:
RecursionError: maximum recursion depth exceeded in comparison
```