Map and Lambda Function

Let's learn some new Python concepts! You have to generate a list of the first N fibonacci numbers, 0 being the first number. Then, apply the map function and a lambda expression to cube each fibonacci number and print the list.

Concept

The `map()` function applies a function to every member of an iterable and returns the result. It takes two parameters: first, the function that is to be applied and secondly, the iterables.

Let's say you are given a list of names, and you have to print a list that contains the length of each name.

```
>> print (list(map(len, ['Tina', 'Raj', 'Tom'])))
[4, 3, 3]
```

Lambda is a single expression anonymous function often used as an inline function. In simple words, it is a function that has only one line in its body. It proves very handy in functional and GUI programming.

```
>> sum = lambda a, b, c: a + b + c
>> sum(1, 2, 3)
6
```

Note:

Lambda functions cannot use the return statement and can only have a single expression. Unlike def, which creates a function and assigns it a name, lambda creates a function and returns the function itself. Lambda can be used inside lists and dictionaries.

Input Format

One line of input: an integer N.

Constraints

$0 \leq N \leq 15$

Output Format

A list on a single line containing the cubes of the first N fibonacci numbers.

Sample Input

```
5
```

Sample Output

```
[0, 1, 1, 8, 27]
```

Explanation

The first 5 fibonacci numbers are $[0, 1, 1, 2, 3]$, and their cubes are $[0, 1, 1, 8, 27]$.

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```python
cube = lambda x: x ** 3  # Lambda function to calculate cube

def fibonacci(n):
    # Returns a list of the first n Fibonacci numbers
    fib_list = []
    a, b = 0, 1
    for _ in range(n):
        fib_list.append(a)
        a, b = b, a + b
    return fib_list

if __name__ == '__main__':…
```

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Next Challenge

- Test case 0
- Test case 1
- Test case 2
- Test case 3
- Test case 4
- Test case 5
- Test case 6

Compiler Message

```
Success
```

Input (stdin) Download

```
5
```

Expected Output Download

```
[0, 1, 1, 8, 27]
```