Map and Lambda Function

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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

Author	harsh_beria93
Difficulty	Easy
Max Score	20
Submitted By	16938

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```
5
```

Sample Output

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

Explanation

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

Current Buffer (saved locally, editable) Python 3

```
1  cube = lambda x: x**3# complete the lambda function
2
3  def fibonacci(n):
4    if(n<1):
5      return []
6    elif(n==1):
7      return [0]
8    elif(n==2):
9      return [0,1]
10   else:
11     l=[0,1]
12     for i in range(2,n):
13       l.append(l[i-2]+l[i-1])
14     return l
15     # return a list of fibonacci numbers
17 if __name__ == '__main__':
18     n = int(input())
19     print(list(map(cube, fibonacci(n))))
```

Line: 6 Col: 12

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10 Testcases

Input (stdin) Download

```
5
```

Expected Output Download

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

Compiler Message

```
Success
```

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