

412 Fizz Buzz

2018年4月11日 10:27

Write a program that outputs the string representation of numbers from 1 to n .
But for multiples of three it should output "Fizz" instead of the number and for the multiples of five output "Buzz". For numbers which are multiples of both three and five output "FizzBuzz".

Example:

$n = 15$,

Return:

```
[
  "1",
  "2",
  "Fizz",
  "4",
  "Buzz",
  "Fizz",
  "7",
  "8",
  "Fizz",
  "Buzz",
  "11",
  "Fizz",
  "13",
  "14",
  "FizzBuzz"
]
```

来自 <<https://leetcode.com/problems/fizz-buzz/description/>>

写一个程序，输出从 1 到 n 数字的字符串表示。

1. 如果 n 是3的倍数，输出 "Fizz" ；
2. 如果 n 是5的倍数，输出 "Buzz" ；
3. 如果 n 同时是3和5的倍数，输出 "FizzBuzz" 。

Solution for Python3:

```
1  class Solution1:
2      def fizzBuzz(self, n):
3          """
4              :type n: int
5              :rtype: List[str]
6          """
7          L = []
8          for i in range(1, n + 1):
9              if not i % 3 and not i % 5:
10                 L.append('FizzBuzz')
11             elif not i % 3:
12                 L.append('Fizz')
13             elif not i % 5:
14                 L.append('Buzz')
15             else:
16                 L.append(str(i))
17         return L
18
19  class Solution2:
20      def fizzBuzz(self, n):
21          """
22              :type n: int
23              :rtype: List[str]
24          """
25         return ['Fizz' * (not i % 3) + 'Buzz' * (not i % 5) or str(i) for i in range(1, n + 1)]
```

Solution for C++:

```
1  class Solution1 {
2  public:
```

```

3     vector<string> fizzBuzz(int n) {
4         vector<string> v(n);
5         for (int i = 1; i <= n; i++) {
6             if (i % 3 == 0)
7                 v[i - 1] += string("Fizz");
8             if (i % 5 == 0)
9                 v[i - 1] += string("Buzz");
10            if (v[i - 1] == "")
11                v[i - 1] += to_string(i);
12        }
13        return v;
14    }
15 };
16
17 class Solution2 {
18 public:
19     vector<string> fizzBuzz(int n) {
20         vector<string> v(n);
21         for (int i = 1, fizz = 0, buzz = 0; i <= n; i++) {
22             fizz++;
23             buzz++;
24             if (fizz == 3 && buzz == 5) {
25                 v[i - 1] += string("FizzBuzz");
26                 fizz = 0;
27                 buzz = 0;
28             } else if (fizz == 3) {
29                 v[i - 1] += string("Fizz");
30                 fizz = 0;
31             } else if (buzz == 5) {
32                 v[i - 1] += string("Buzz");
33                 buzz = 0;
34             } else {
35                 v[i - 1] += to_string(i);
36             }
37         }
38         return v;
39     }
40 };

```