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Intuition

The code aims to generate the "FizzBuzz" sequence up to a given integer `n`. It iterates through numbers from 1 to `n`, checking each number's divisibility by 3, 5, or both. When a number is divisible by both 3 and 5, it appends "FizzBuzz" to the output list. If it's divisible only by 3, it appends "Fizz"; if only by 5, it appends "Buzz". If none of these conditions are met, it appends the number itself converted to a string. This approach ensures that the resulting list contains the appropriate strings according to the FizzBuzz rules. The function then returns this list. The code's simplicity and efficiency lie in its straightforward iteration over the given range and conditional appending of values based on divisibility.

Approach

1. Initialize an empty list called `output` to store the FizzBuzz sequence.
2. Iterate over numbers from 1 to `n` inclusive using a `for` loop.
3. Within each iteration, check if the current number is divisible by both 3 and 5. If it is, append "FizzBuzz" to the `output` list.
4. If the current number is only divisible by 3 (but not 5), append "Fizz" to the `output` list.
5. If the current number is only divisible by 5 (but not 3), append "Buzz" to the `output` list.
6. If the current number is not divisible by either 3 or 5, append the string representation of the number itself to the `output` list.
7. After iterating through all numbers from 1 to `n`, return the `output` list containing the FizzBuzz sequence.

Complexity

- Time complexity: O(n)
- Space complexity: O(n)

Code

```
class Solution:
    def fizzBuzz(self, n: int) -> List[str]:
        output = []
        for i in range(1, n+1):
            if i % 3 == 0 and i % 5 == 0:
                output.append("FizzBuzz")
            elif i % 3 == 0:
                output.append("Fizz")
            elif i % 5 == 0:
                output.append("Buzz")
            else:
                output.append(str(i))
        return output
```

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