# [CS 11] Prac 9a – FizzBuzz III

## Problem Statement

As your next task in your Geegle Inc. application, you were given a new task, creatively called FizzBuzz III. This is a follow-up to FizzBuzz II: Electric Boogaloo.

In this task, you are given a sequence of positive integers, and two digits $x$ and $y$. Your task is to give a sequence with the same elements, except you replace some of the elements with others as follows:

- if the element's first digit is a $x$, you replace it with the string "Fizz".
- if the element's last digit is a $y$, you replace it with the string "Buzz".
- if both conditions above are true, you replace it with the string "FizzBuzz".

Can you perform the task?

## Task Details

Your task is to implement a function called `fizzbuzz`. This function has three parameters:

- the first is the `int` $x$.
- the second is the `int` $y$.
- the third is an iterable of `int`s.

The function must return a *generator* that generates `int`s or `str`s, as described in the problem statement.

Note that your generator must be **as lazy as possible**. It should yield each resulting next element as soon as it has enough information, and it should produce these results while advancing the input generators for as little as possible.

## Restrictions

In this lab session, many names are banned. Here are a few of them: `input`, `type`. This is *not* an exhaustive list. (If you accidentally use a variable name that turns out to be banned, please rename it.)

The following imports are now allowed:

- `count`, `islice`, and `chain` from `itertools`. (Read the docs to learn what they do!)
- `randint` and `randrange` from `random`.
- `Fraction` from `fractions`.

For this problem in particular:

- Recursion is **disallowed**. (The recursion limit has been greatly reduced.)
- The source code limit is $2000$.

## Example Calls

### Example 1 Function Call

```
[*fizzbuzz(3, 5, [31415, 92, 65, 358, 979, 3, 23, 8, 46])]
```

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### Example 1 Return Value

```
['FizzBuzz', 92, 'Buzz', 'Fizz', 979, 'Fizz', 23, 8, 46]
```

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### Example 2 Function Call

```
[*fizzbuzz(3, 5, iter([31415, 92, 65, 358, 979, 3, 23, 8, 46]
```

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### Example 2 Return Value

```
['FizzBuzz', 92, 'Buzz', 'Fizz', 979, 'Fizz', 23, 8, 46]
```

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## Constraints

- The function `fizzbuzz` will be called at most $200$ times.
- At most $500$ elements will be consumed from the returned generator.
- Each element of the input sequence is a positive integer less than $10^{10}$.
- $0 \leq x, y \leq 9$

## Scoring

- You get $125$ ❤️ points if you solve all test cases.

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## Clarifications

Report an issue

No clarifications have been made at this time.

Sub[illegible] solution

[CS 11] Practice 9 ❤️

My submissions ❤️

**Points:** 125 (partial)

**Time limit:** 4.0s

**Memory limit:** 1G

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**Problem type**

**Allowed languages**
~~NONE~~, py3