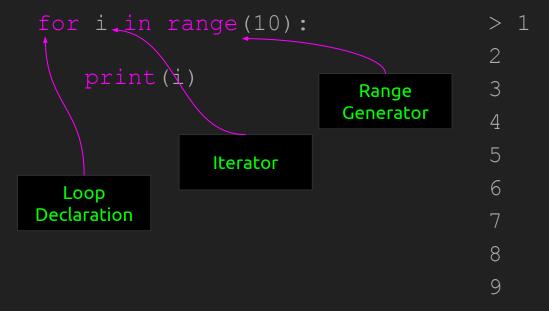# Code for Teachers

A practical approach to programming

Chapter 2-3:
The `for` Loop

Basic Concepts

- `for` loops repeat over a range
  - Either over an *iterable* data type (stay tuned)
  - Or over a `range` object
- Differences from `while`
  - Iterator variable is built-in
  - Guaranteed to stop
  - Requires the programmer to know how many times she wants to loop

Syntax Breakdown

```
for i in range(10):

    print(i)
```

Range Generator

Iterator

Loop Declaration

> 1
2
3
4
5
6
7
8
9

Code Example: FizzBuzz

- Popular math game
- Also, a popular technical interview question for developers
- Rules:
  - Count from 1…n
  - If n is divisible by 3, say "Fizz!"
  - If n is divisible by 5, say "Buzz!"
  - If n is divisible by 3 AND 5, say "FizzBuzz!"
  - 1,2,F,4,B,F,7,8,F,B,11,F,13,14,FB

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