

# Итераторы

```
In [1]: for number in range(5):  
        print(number & 1)
```

```
0  
1  
0  
1  
0
```

```
In [2]: for letter in 'python':  
        print(ord(letter))
```

```
112  
121  
116  
104  
111  
110
```

```
In [3]: iterator = iter([1, 2, 3])
```

```
In [4]: print(next(iterator))
```

```
1
```

```
In [5]: print(next(iterator))
```

```
2
```

```
In [6]: print(next(iterator))
```

3

```
In [7]: print(next(iterator))
```

```
-----  
-----
```

StopIteration

Traceback (most recent call last)

<ipython-input-7-369d18de2e56> in <module>()

----> 1 print(next(iterator))

StopIteration:

```
In [8]: class SquareIterator:
    def __init__(self, start, end):
        self.current = start
        self.end = end

    def __iter__(self):
        return self

    def __next__(self):
        if self.current >= self.end:
            raise StopIteration

        result = self.current ** 2
        self.current += 1
        return result

for num in SquareIterator(1, 4):
    print(num)
```

```
1
4
9
```

```
In [9]: class IndexIterable:
        def __init__(self, obj):
            self.obj = obj

        def __getitem__(self, index):
            return self.obj[index]

for letter in IndexIterable('str'):
    print(letter)
```

```
s
t
r
```