

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