Итераторы

In [1]:
```python
for number in range(5):
    print(number & 1)
```
```
0
1
0
1
0
```

In [2]:
```python
for letter in 'python':
    print(ord(letter))
```
```
112
121
116
104
111
110
```

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

In [4]:
```python
print(next(iterator))
```
```
1
```

In [5]:
```python
print(next(iterator))
```
```
2
```

In [6]:
```python
print(next(iterator))
```
```
3
```

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

```
---------------------------------------------------------
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StopIteration                           Traceback (most
recent call last)
<ipython-input-7-369d18de2e56> in <module>()
----> 1 print(next(iterator))

StopIteration:
```

```python
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