The Iterable Protocol (Reprise)

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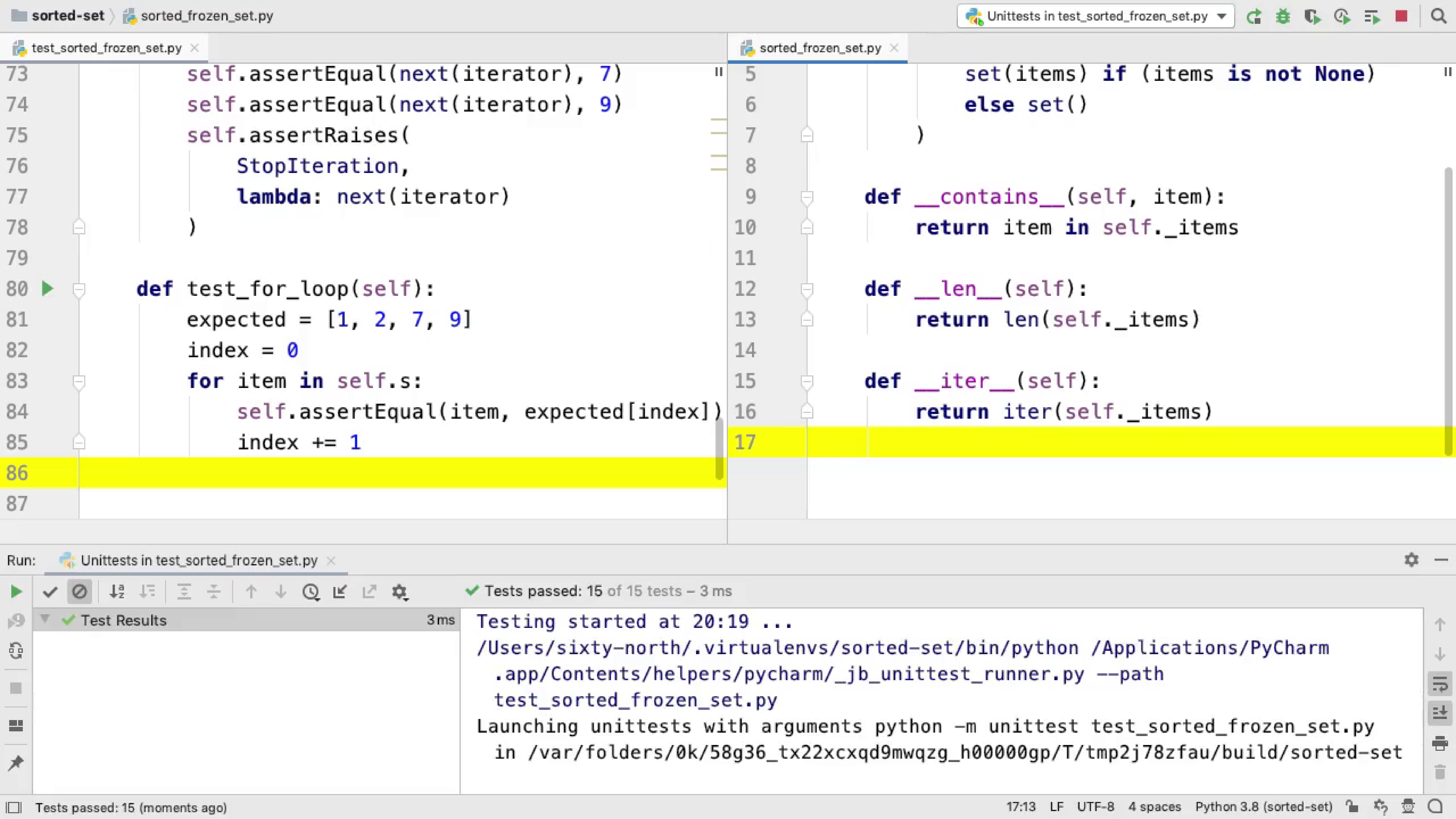
The Iterable Protocol

Obtain an **iterator** using `iter(iterable)`

Special **method** `__iter__()`

Fallback to the the **alternative** iterable protocol with `__getitem__()`


sorted-set
sorted_frozen_set.py
Unittests in test_sorted_frozen_set.py
test_sorted_frozen_set.py
sorted_frozen_set.py
Run:
Unittests in test_sorted_frozen_set.py
Test Results
3 ms

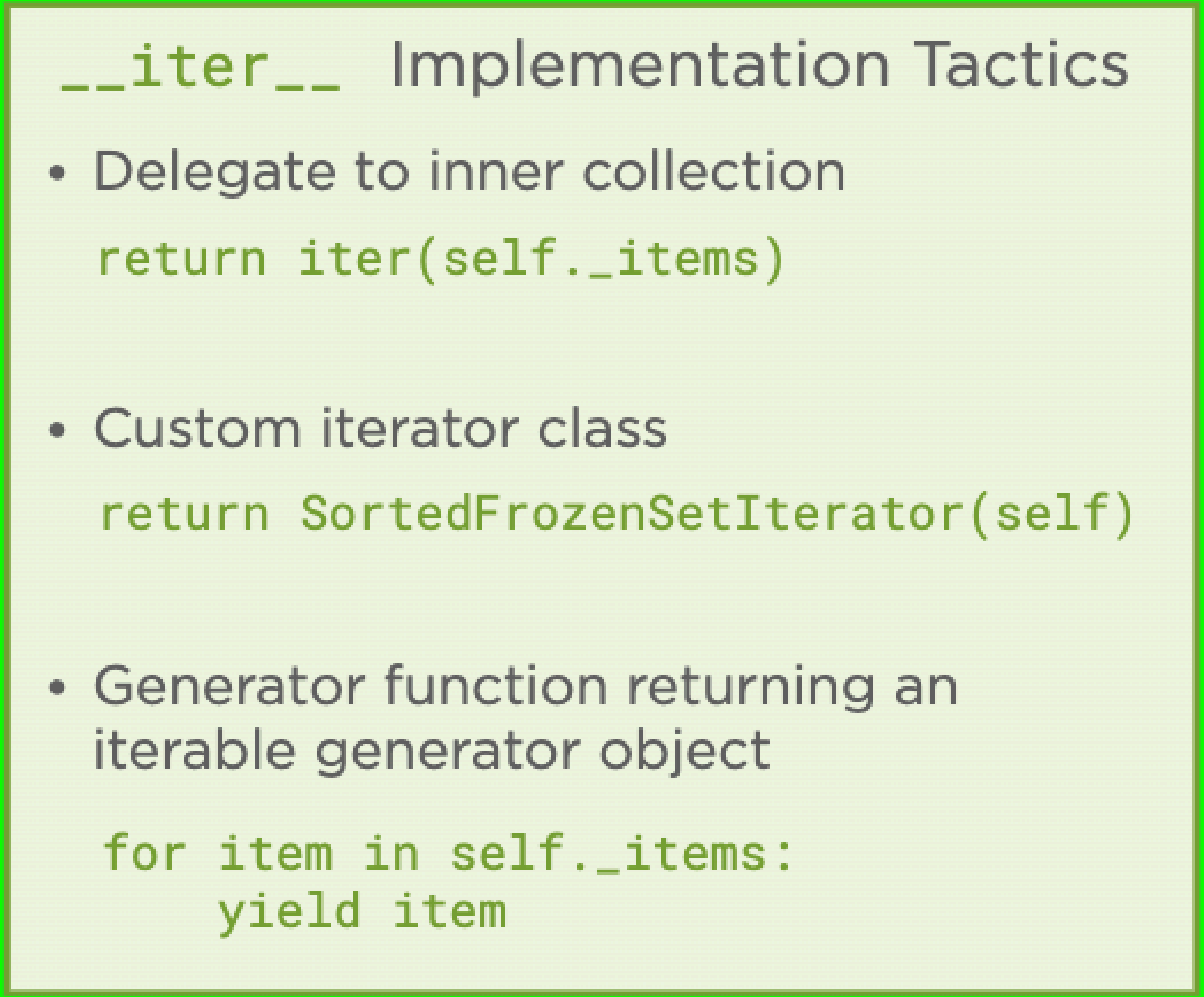
```python
        self.assertEqual(next(iterator), 7)
        self.assertEqual(next(iterator), 9)
        self.assertRaises(
            StopIteration,
            lambda: next(iterator)
        )

    def test_for_loop(self):
        expected = [1, 2, 7, 9]
        index = 0
        for item in self.s:
            self.assertEqual(item, expected[index])
            index += 1


```

```python
            set(items) if (items is not None)
            else set()
        )

    def __contains__(self, item):
        return item in self._items

    def __len__(self):
        return len(self._items)

    def __iter__(self):
        return iter(self._items)

```

✓ Tests passed: 15 of 15 tests – 3 ms

```
Testing started at 20:19 ...
/Users/sixty-north/.virtualenvs/sorted-set/bin/python /Applications/PyCharm
  .app/Contents/helpers/pycharm/_jb_unittest_runner.py --path
  test_sorted_frozen_set.py
Launching unittests with arguments python -m unittest test_sorted_frozen_set.py
  in /var/folders/0k/58g36_tx22xcxqd9mwqzg_h00000gp/T/tmp2j78zfau/build/sorted-set
```

Tests passed: 15 (moments ago)   17:13 LF UTF-8 4 spaces Python 3.8 (sorted-set)



__iter__ Implementation Tactics

- Delegate to inner collection

```
return iter(self._items)
```

- Custom iterator class

```
return SortedFrozenSetIterator(self)
```

- Generator function returning an iterable generator object

```
for item in self._items:
    yield item
```