

# The Sized Protocol

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# The Sized Protocol

**Number** of items using `len(sized)`

Must **not** consume or modify collection

Special **method** `__len__()`

test\_sorted\_frozen\_set.py

```
54
55 def test_ten(self):
56     s = SortedFrozenSet(range(10))
57     self.assertEqual(len(s), 10)
58
59 def test_with_duplicates(self):
60     s = SortedFrozenSet([5, 5, 5])
61     self.assertEqual(len(s), 1)
62
63
64 if __name__ == "__main__":
65     unittest.main()
66
```

TestSizedProtocol &gt; test\_with\_duplicates()

sorted\_frozen\_set.py

```
1 class SortedFrozenSet:
2
3     def __init__(self, items=None):
4         self._items = (
5             set(items) if (items is not None)
6             else set()
7         )
8
9     def __contains__(self, item):
10         return item in self._items
11
12     def __len__(self):
13         return len(self._items)
14
```

SortedFrozenSet

Run: Unittests in test\_sorted\_frozen\_set.py



Tests passed: 13 of 13 tests - 2 ms

Test Results

2 ms

Testing started at 19:19 ...

```
/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/tmpwuhrizvq/build/sorted-set
```

Tests passed: 13 (moments ago)