

Can a method within a class be generator?

Asked 6 years, 7 months ago Modified 3 years, 3 months ago Viewed 11k times



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Is it acceptable/Pythonic to use a method in a class as a generator? All the examples I have found show the yield statement in a function, not in a class.

Here is an example working code:



```
class SomeClass(object):
    def first_ten(self):
        for i in range(10):
            yield i

    def test(self):
        for i in self.first_ten():
            print i

SomeClass().test()
```

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edited May 20, 2016 at 14:36



[Martijn Pieters](#) ♦

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asked May 20, 2016 at 14:32



[jgrant](#)

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I would guess that most examples are functions because that's simpler; you don't need to be in a class, so it isn't shown. – [jonrsharpe](#) May 20, 2016 at 14:35

1 Answer

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Yes, this is perfectly normal. For example, it is commonly used to implement an [object.__iter__\(\)](#) [method](#) to make an object an iterable:

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However, don't feel limited by that common pattern; anything that requires iteration is a candidate for a generator method.

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edited Sep 21, 2019 at 13:02

answered May 20, 2016 at 14:33



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- 1 +1 that iterator pattern is a good example. diveintopython3.net by Mark Pilgrim covers some of this.
– [Pax Vobiscum](#) May 20, 2016 at 14:47

If you are getting `TypeError: 'SomeContainer' object is not an iterator`, you are probably trying something like `sc = SomeContainer` with `next(sc)` to get each value. Instead do `sc_iter = iter(sc)` and then `next(sc_iter)`. See (oreilly.com/library/view/python-cookbook-3rd/9781449357337/...). – [DocOc](#) Sep 21, 2019 at 12:17

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- 1 You mean `sc = SomeContainer()`, probably :-). Yes, `SomeContainer()` instances are iterable, they are not an iterator object. `next()` requires an iterator, and `iter()` produces an iterator from an iterable. The difference is that an iterable can produce any number of iterators, but iterators are single-use.
– [Martijn Pieters](#) ♦ Sep 21, 2019 at 13:01 ✎
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