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Exercise: genPrimes

Finger Exercises due Aug 5, 2020 20:30 -03 *Completo*

Exercise: genPrimes

5/5 points (graded)
ESTIMATED TIME TO COMPLETE: 10 minutes

Write a generator, `genPrimes`, that returns the sequence of prime numbers on successive calls to its `next()` method: 2, 3, 5, 7, 11, ...

Hints

Ideas about the problem

```
def genPrimes():
    x = 1
    primo = []
    while True:
        x += 1
        controle = True
        for i in primo:
            if x % i == 0:
                # Não é primo!
                controle = False
                break
        if controle: # É primo!
            primo.append(x)
            yield x #str(primo[-1]) #+ '\n'
```

Press ESC then TAB or click outside of the code editor to exit

Correta

```
# Note that our solution makes use of the for/else clause, which
# you can read more about here:
# http://docs.python.org/release/1.5/tut/node23.html

def genPrimes():
    primes = []   # primes generated so far
    last = 1      # last number tried
    while True:
        last += 1
        for p in primes:
            if last % p == 0:
                break
        else:
            primes.append(last)
            yield last
```

Test results

Hide output

CORRECT

Test: first prime

```
primeGenerator = genPrimes()
primeGenerator.next()
```

Output:

```
2
```

Test: random primes 1

```
In this test we generate the first n primes.
```

Output:

```
Generating the first 13 primes
2
3
5
7
11
13
17
19
23
29
31
37
41
```

Test: random primes 2

In this test we generate the first n primes.
We print every 10th prime number.

Output:

```
Generating the first 181 primes
2
31
73
127
179
233
283
353
419
467
547
607
661
739
811
877
947
1019
1087
```

Hide output

Enviar

Answers are displayed within the problem

Exercise: genPrimes

Topic: Lecture 10 / Exercise: genPrimes

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All Posts

That took me 5 hours.

discussion posted a day ago by **Barkevious**

I think I'll need a LOT more practice understanding classes, methods, and generators. Something isn't clicking quite yet.

This post is visible to everyone.

Add a Response

1 response

pstichnoth

about 23 hours ago

yeah this one was HARD. Took a long time to wrap my head around. I think what helped was trying to recreate the Fibonacci example from memory, and remembering to increment things at the right places.

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Pré-visualizar

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