O laço for

imprimindo k mensagens

o que acontece neste código?

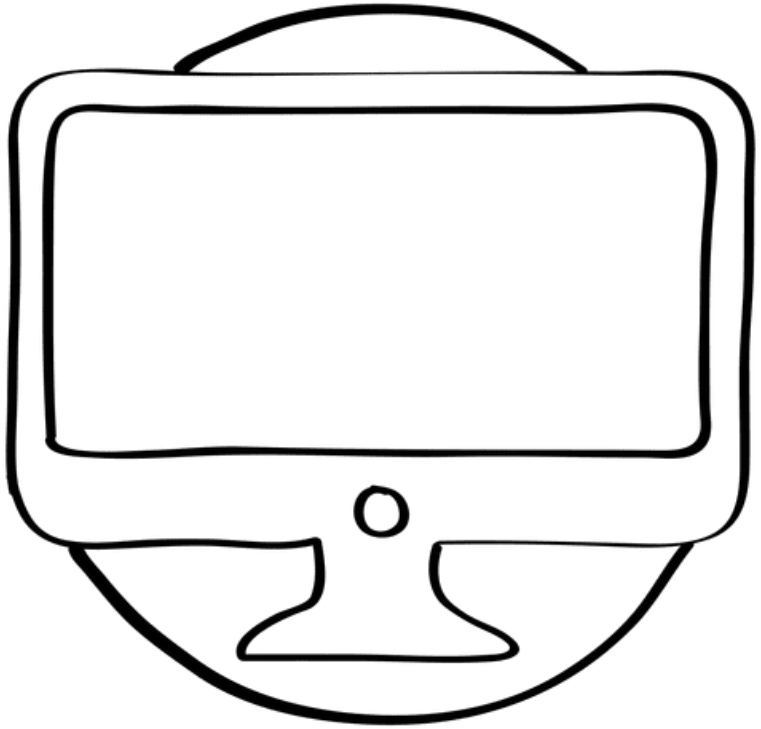
```
for k in range(3):
    print(“Olá mundo”)
```

=> 1o. resolve-se o intervalo

0, 1, 2

```
for k in range(3):

    print("Olá mundo")
```



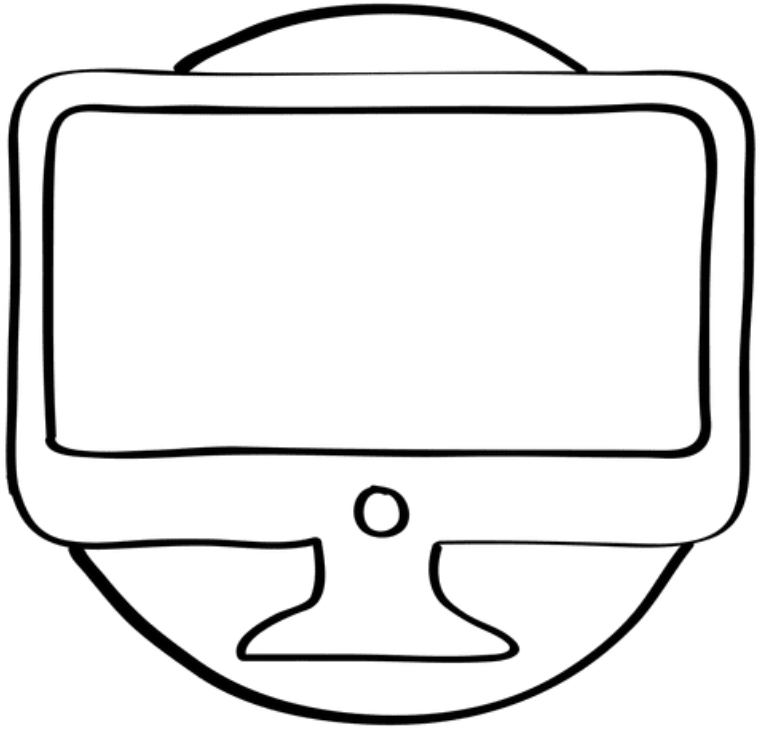
=> cria-se a variável k e faz a atribuição

0

~~0,~~ 1, 2

```
for k in ~~range(3)~~:

    print("Olá mundo")
```



=> imprime a mensagem

```
for k in range(3):
    print("Olá mundo")
```

0

0, 1, 2

=> faz a atribuição do próx val do intervalo

1

~~0, 1,~~ 2

```
for k in ~~range(3)~~:

    print("Olá mundo")
```

=> imprime a mensagem

1

~~0, 1,~~ 2

```
for k in ~~range(3)~~:

    print(“Olá mundo”)
```

=> faz a atribuição do próx val do intervalo

```
for k in range(3):

    print("Olá mundo")
```

2

~~0, 1, 2~~

=> imprime a mensagem

```
for k in range(3):
    print("Olá mundo")
```

2

~~0, 1, 2~~

=> cria-se a variável k e faz a atribuição

```
for k in range(3):

    print("Olá mundo")
```

2

~~0, 1, 2~~

=> cria-se a variável k e faz a atribuição

```
for k in range(3):

    print("Olá mundo")
```

2

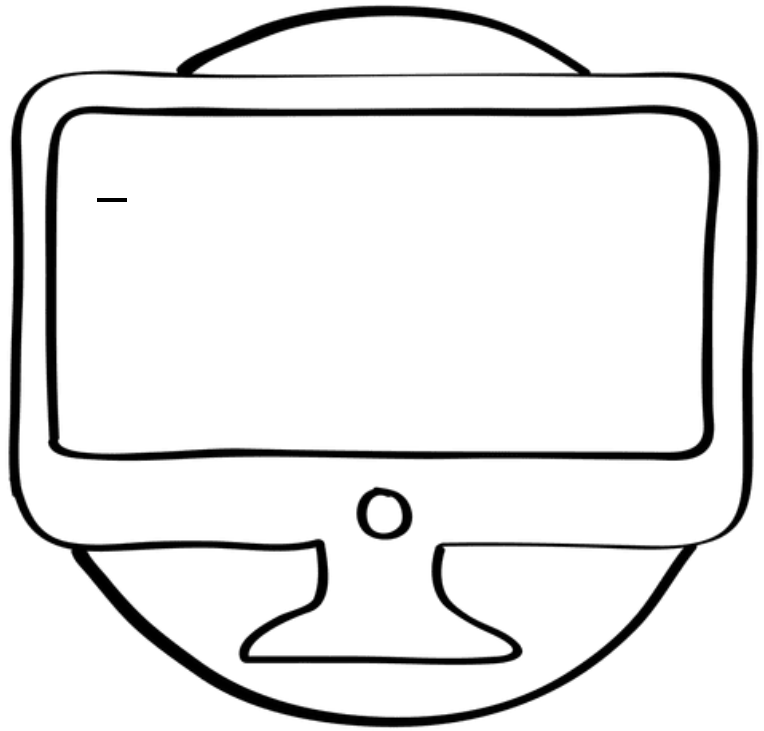
~~0, 1, 2~~

imprimindo um intervalo

imprimindo um intervalo

```
for k in range(3):

    print(k)
```



```
for k in range(3):

    print(k)
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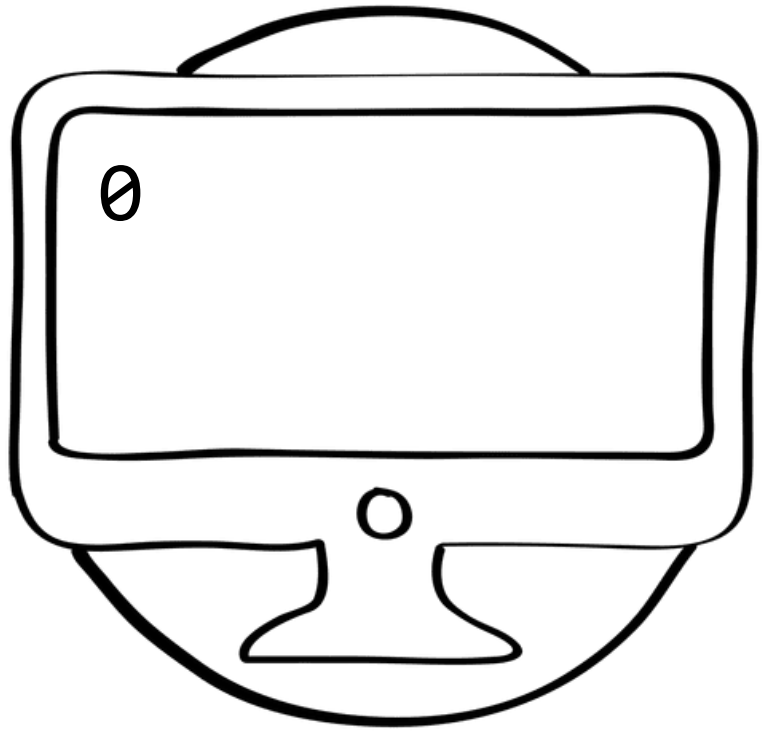

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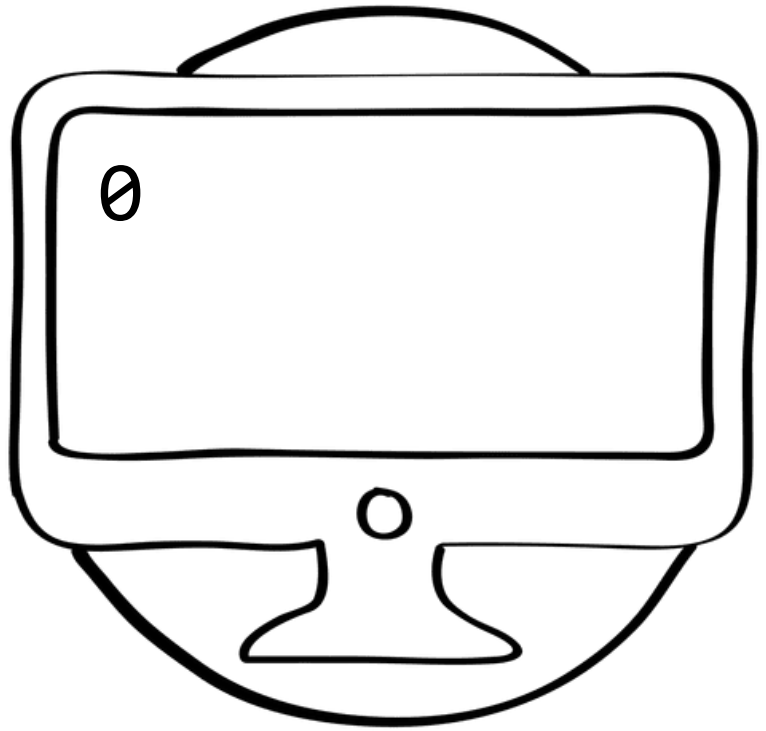

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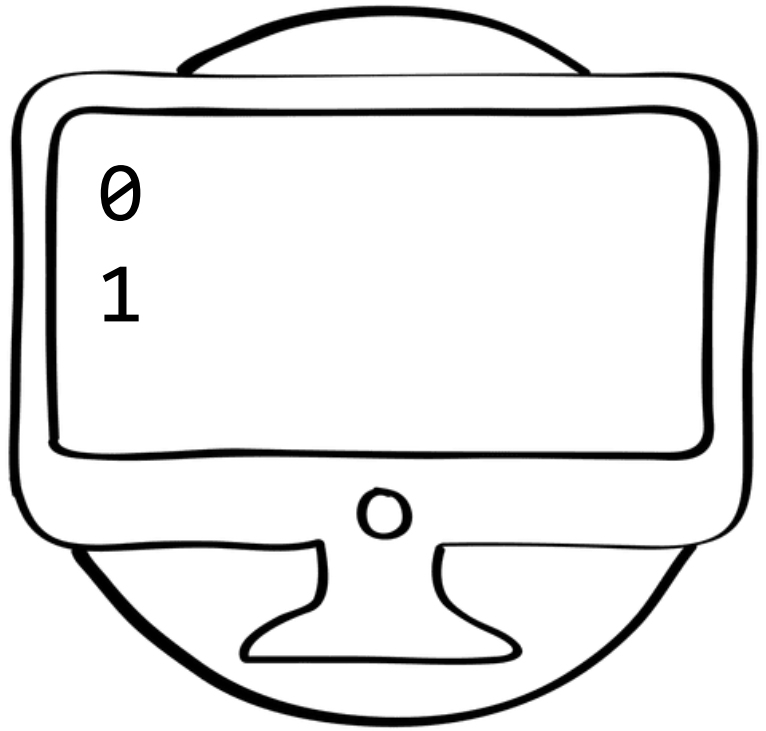

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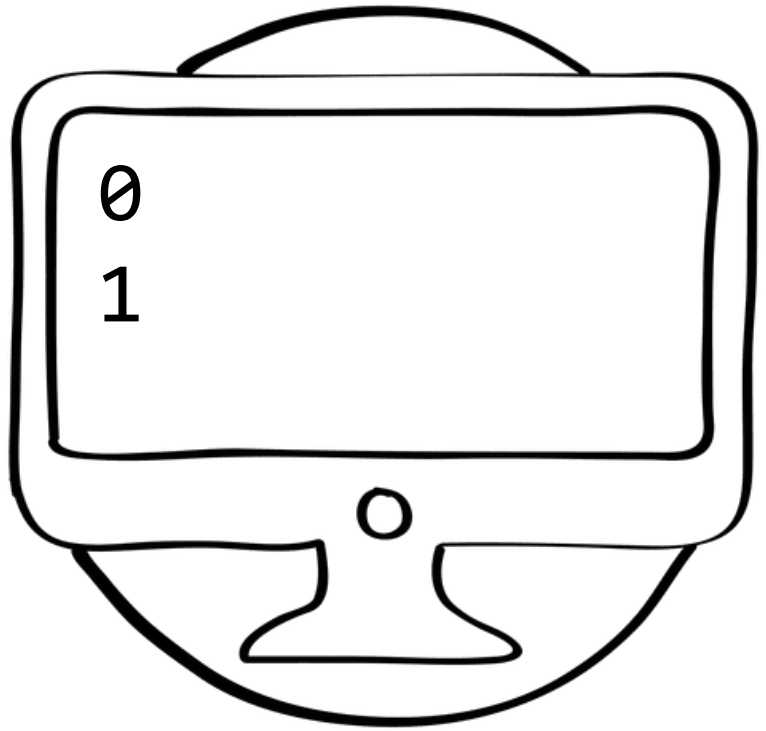

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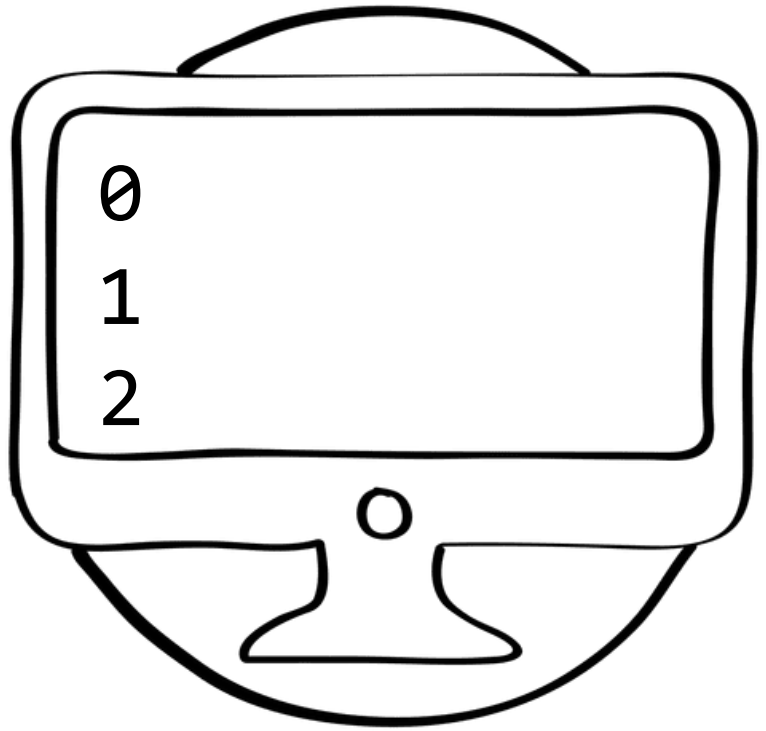

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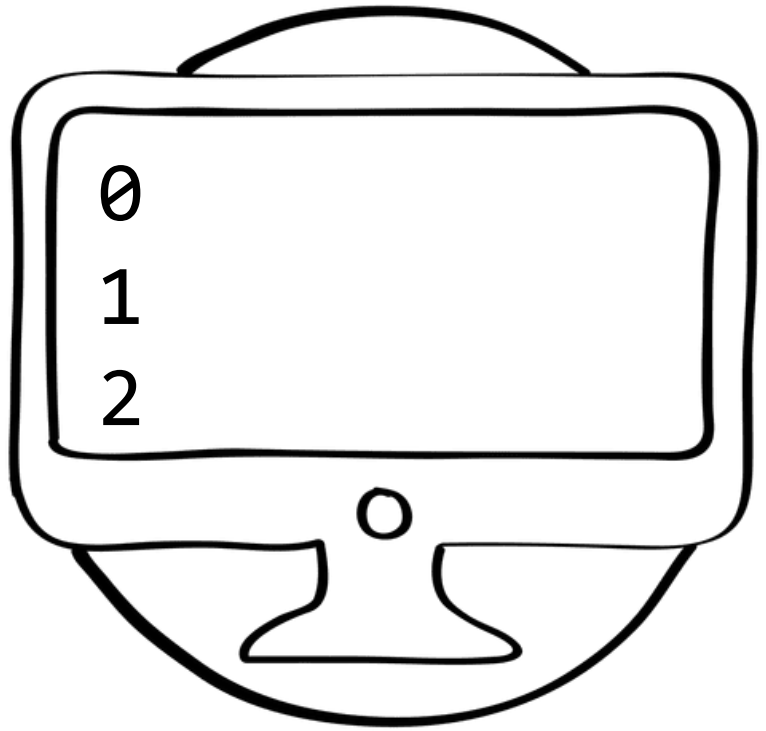

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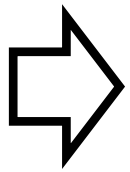

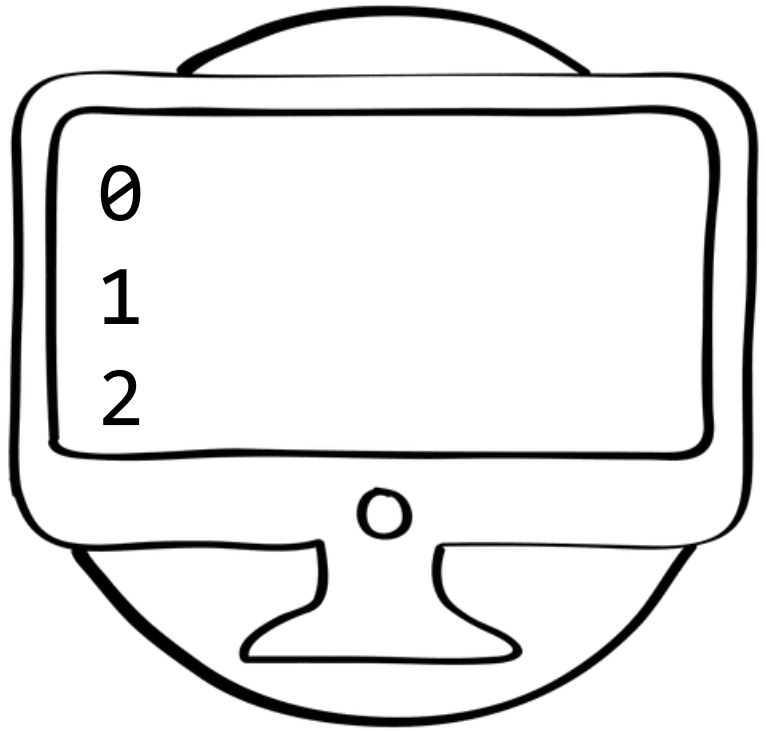

contagem

contagem

```
cont = 0

for k in range(3):

   cont = cont + 1

print(cont)
```

```
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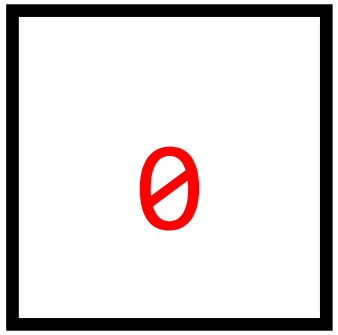
for k in range(3):

    cont = cont + 1

print(cont)
```

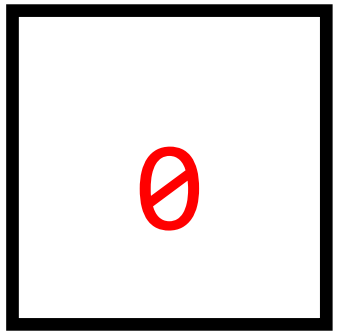


cont

```
cont = 0
       0
for k in range(3):

    cont = cont + 1

print(cont)
```



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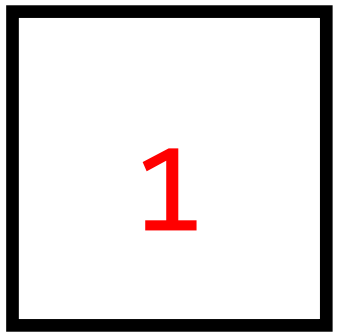

cont

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cont = 0
    1
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print(cont)
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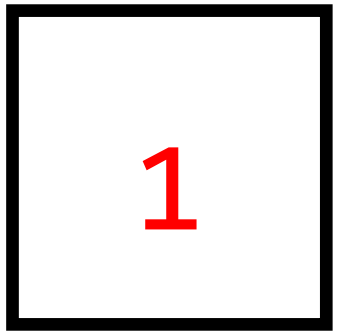

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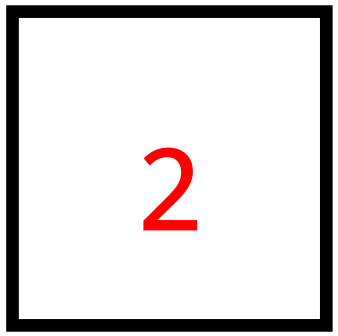

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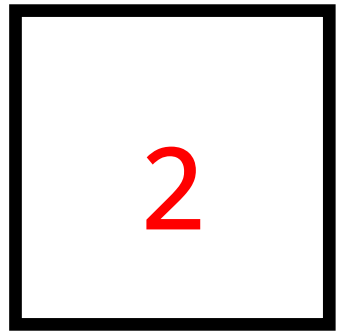

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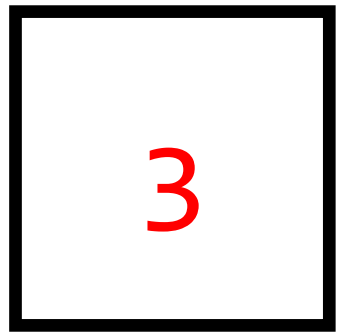

cont

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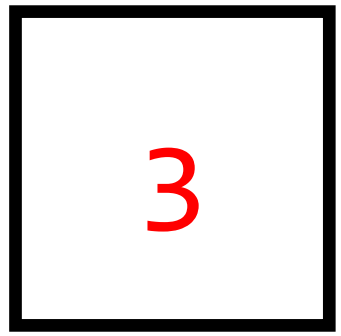

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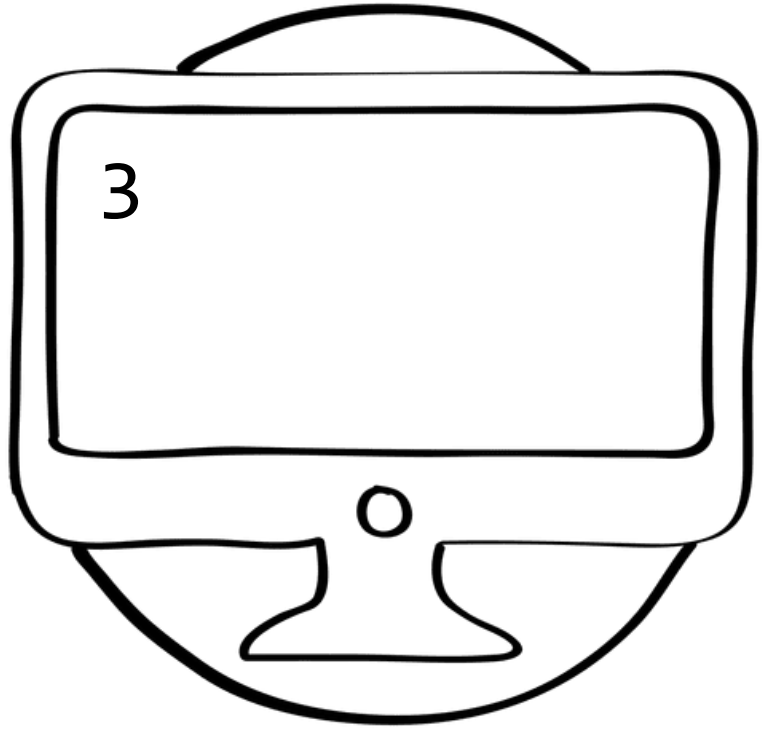


$$\sum_{k=1}^{n} k$$

somando uma sequência

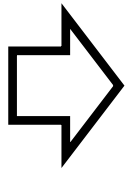
somando uma sequência

```
total = 0

for k in range(3):

  total = total + k

print(total)
```



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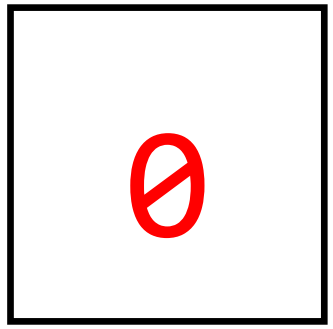

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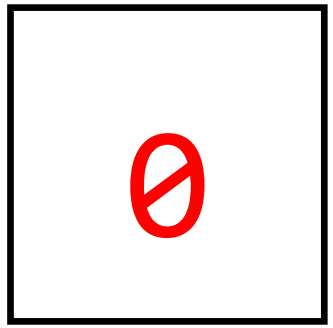
```



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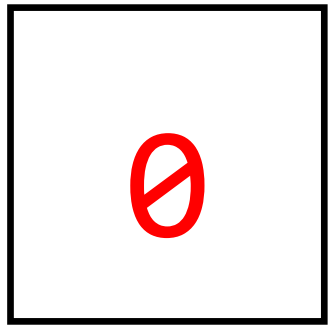

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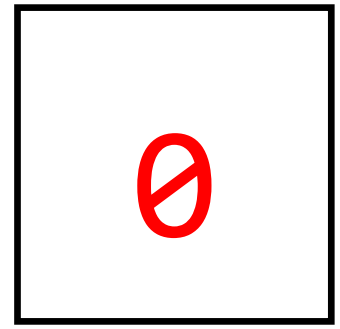

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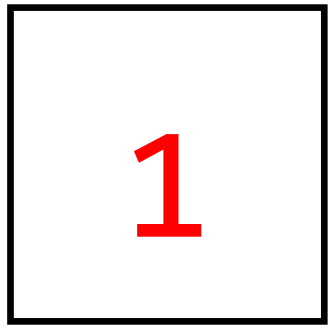
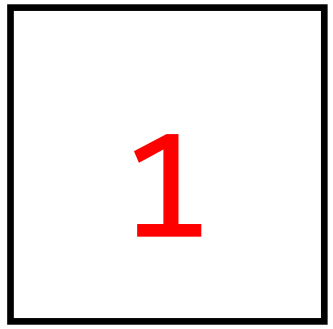


```
total = 0
    2
for k in range(3):

  total = total + k

print(total)
```



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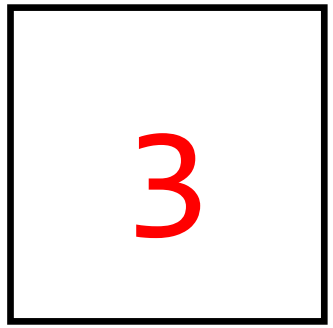

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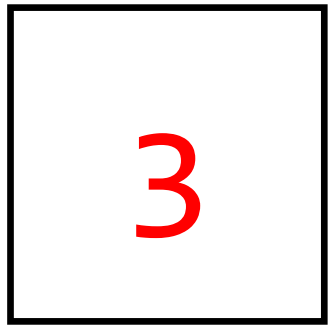

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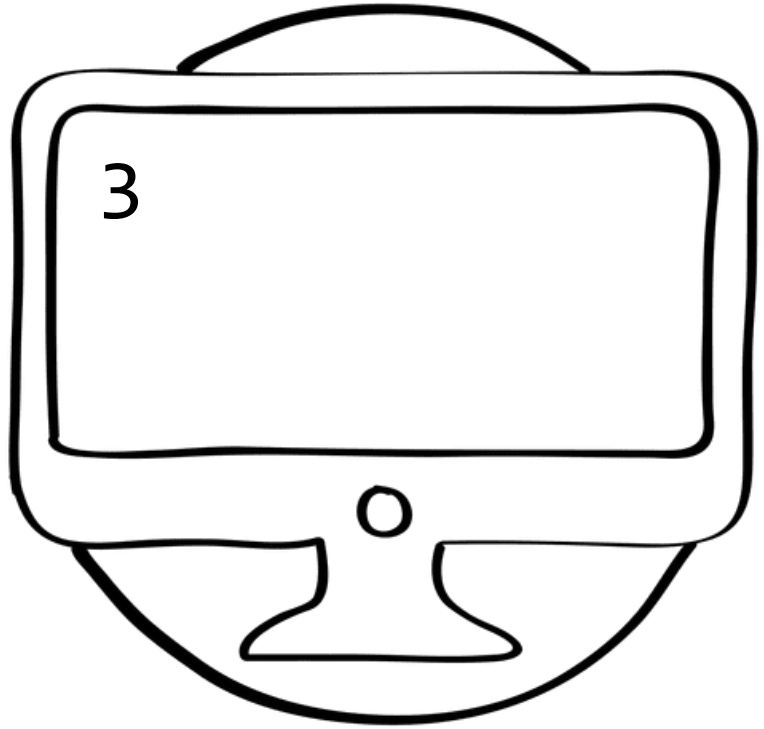

$$1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \ldots + \frac{1}{n} = \sum_{k=1}^{n} \frac{1}{k}$$

soma harmônica

soma harmônica

```
soma = 0

for k in range(1, n + 1):

    soma += 1 / k

print(total)
```

```
n = 3

soma = 0

for k in range(1, n + 1):

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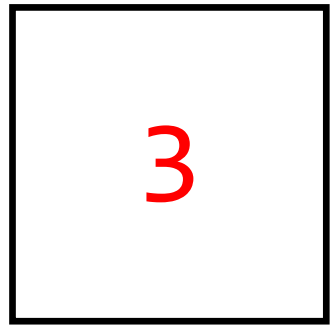
```



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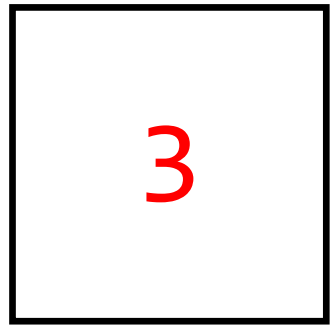
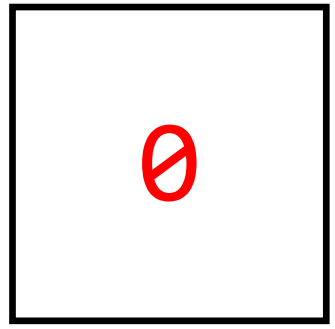


n



soma

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n = 3

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       1          1, 2, 3
for k in range(1, n + 1):

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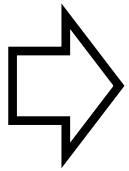
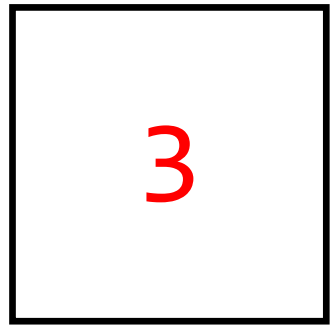
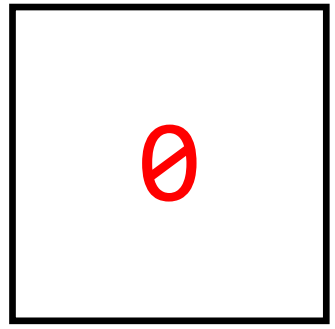




n



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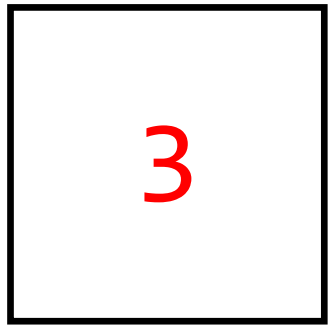
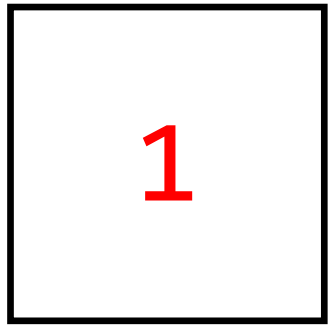


n



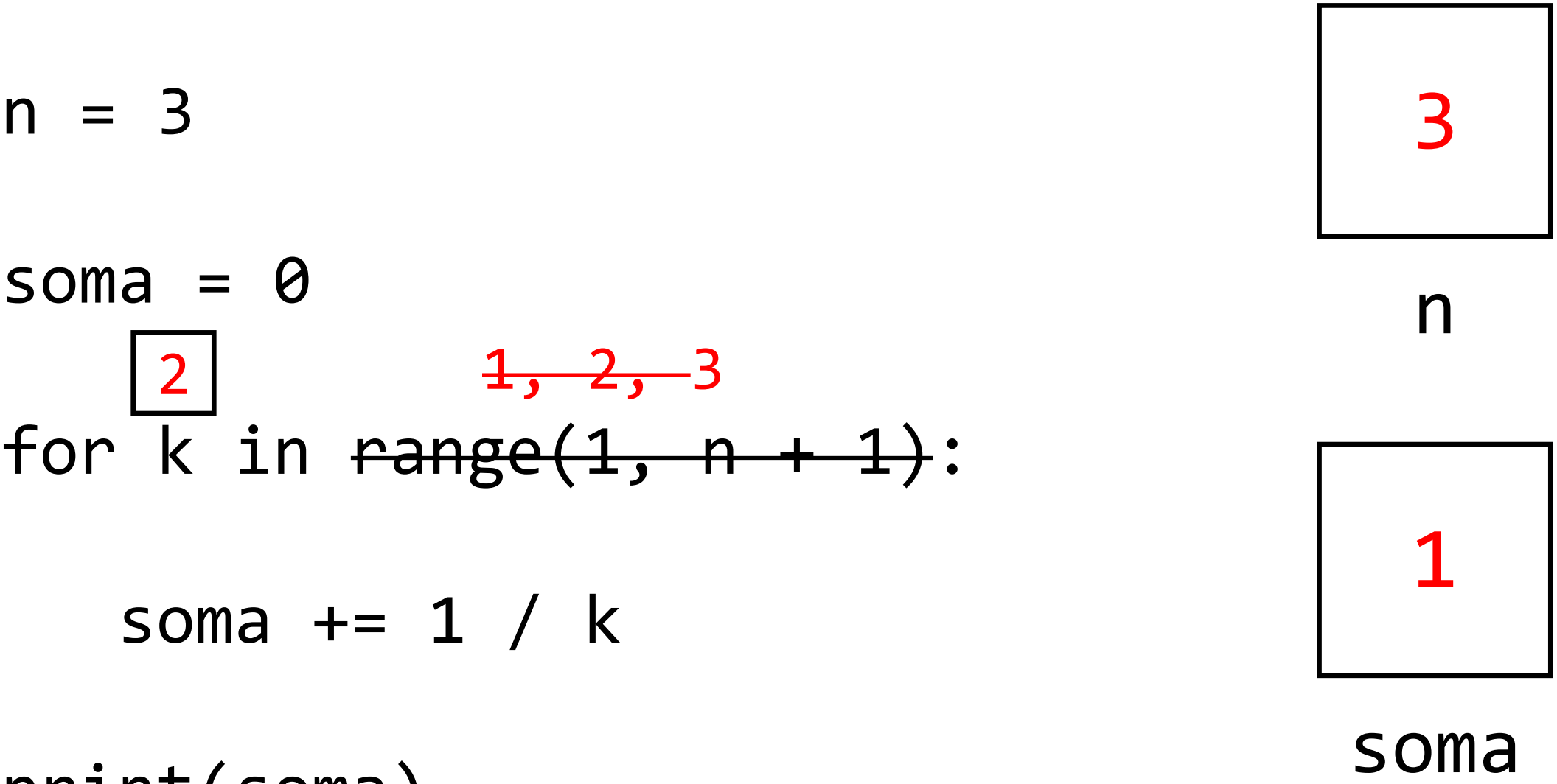
soma

```
n = 3

soma = 0
    2          1, 2, 3
for k in range(1, n + 1):

    soma += 1 / k

print(soma)
```



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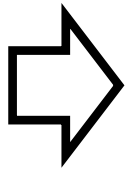
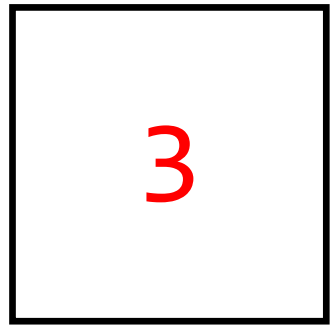
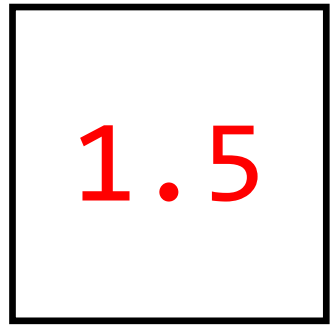
```





n



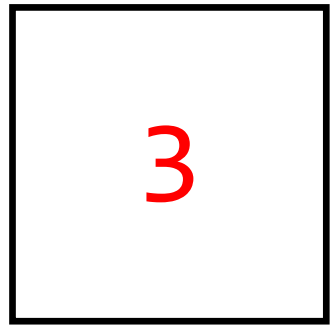
soma

```
n = 3

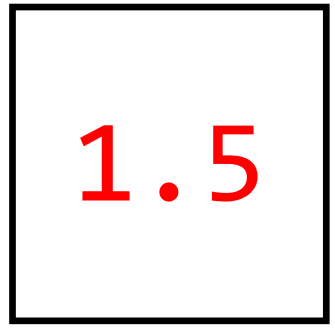
soma = 0
       3          1, 2, 3
for k in range(1, n + 1):

    soma += 1 / k

print(soma)
```



n



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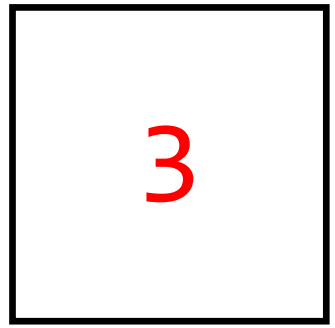

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3

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