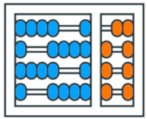


Instituto de Computação

UNIVERSIDADE ESTADUAL DE CAMPINAS

UNICAMP

MC102 - Aula 06

Exemplos Sobre Comandos de Repetição

Algoritmos e Programação de Computadores

Turmas

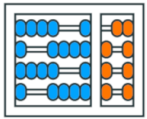
OVXZ

Prof. Lise R. R. Navarrete

lrommel@ic.unicamp.br

Terça-feira, 05 de abril de 2022

21:00h - 23:00h (CB06)



Instituto de Computação

UNIVERSIDADE ESTADUAL DE CAMPINAS

UNICAMP

MC102 – Algoritmos e Programação de Computadores

Turmas

OVXZ

https://ic.unicamp.br/~mc102/

Site da Coordenação de MC102

Aulas teóricas:

Terça-feira, 21:00h - 23:00h (CB06)

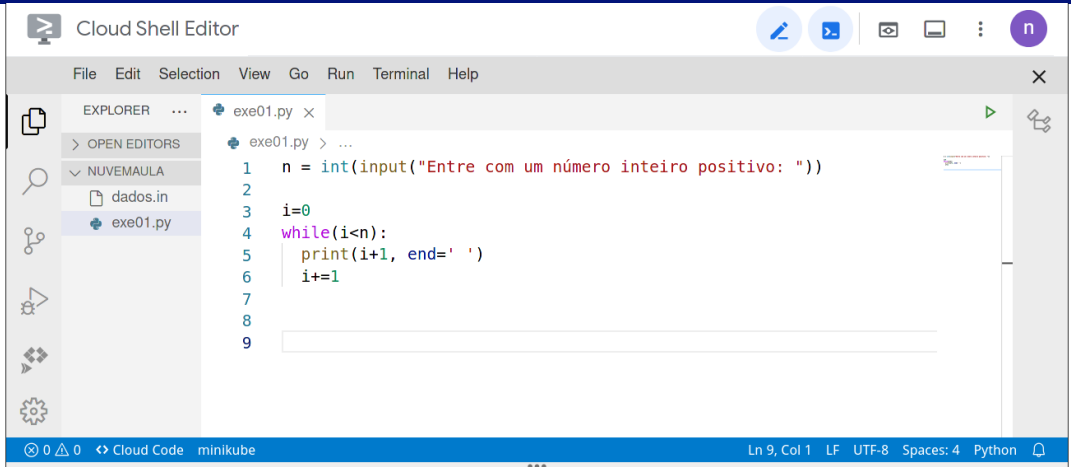
Quinta-feira, 19:00h - 21:00h (CB06)

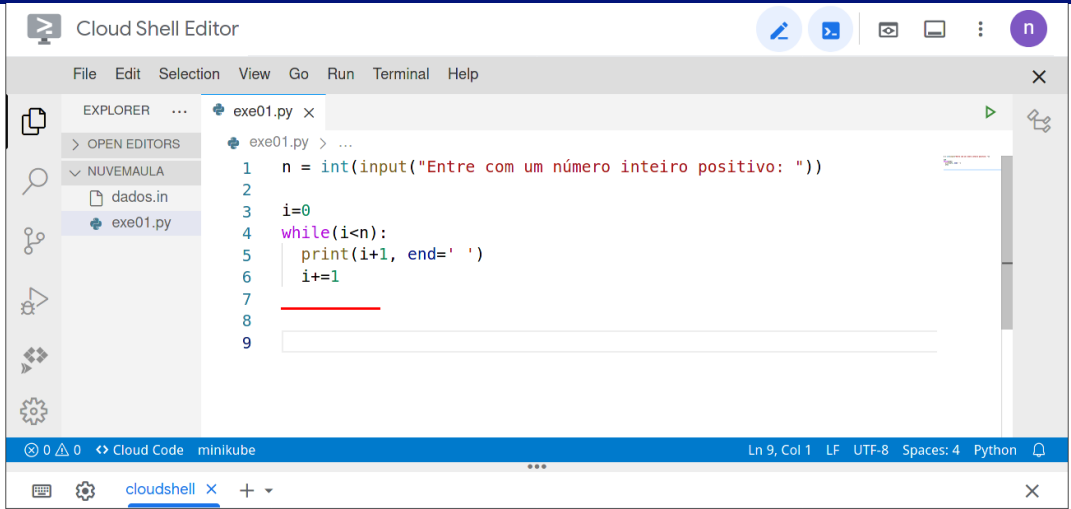
Conteúdo

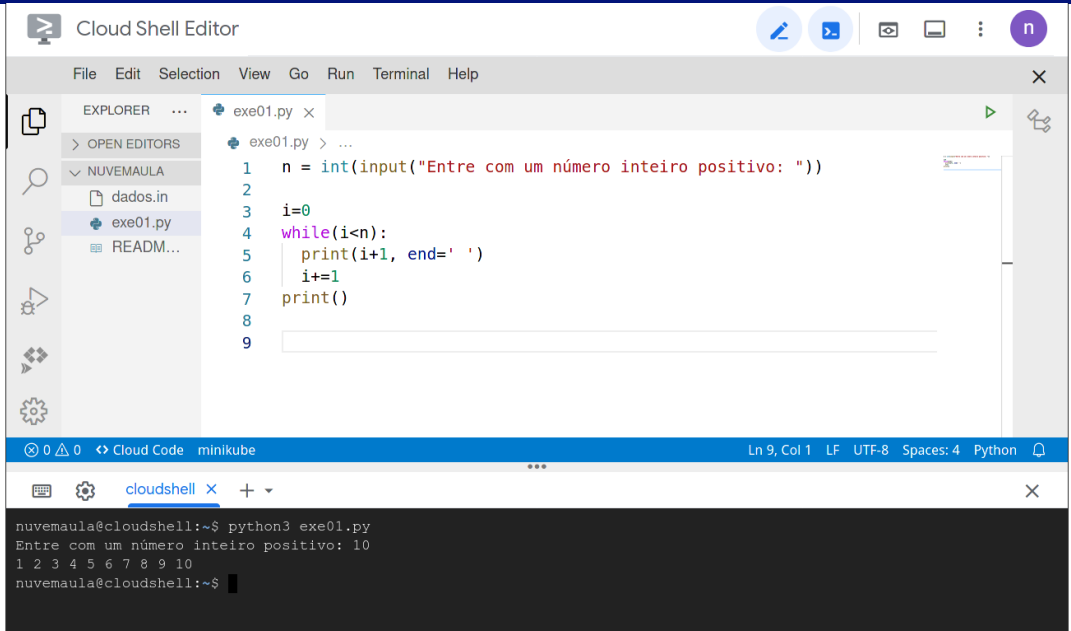
- 01 - Sequências de Números
- 02 - Contadores e Acumuladores
- 03 - Máximo e Mínimo
- 04 - Percorrendo uma String
- 05 - Break e continue
- 06 - Laços Aninhados
- 07 - Divisores de um Número

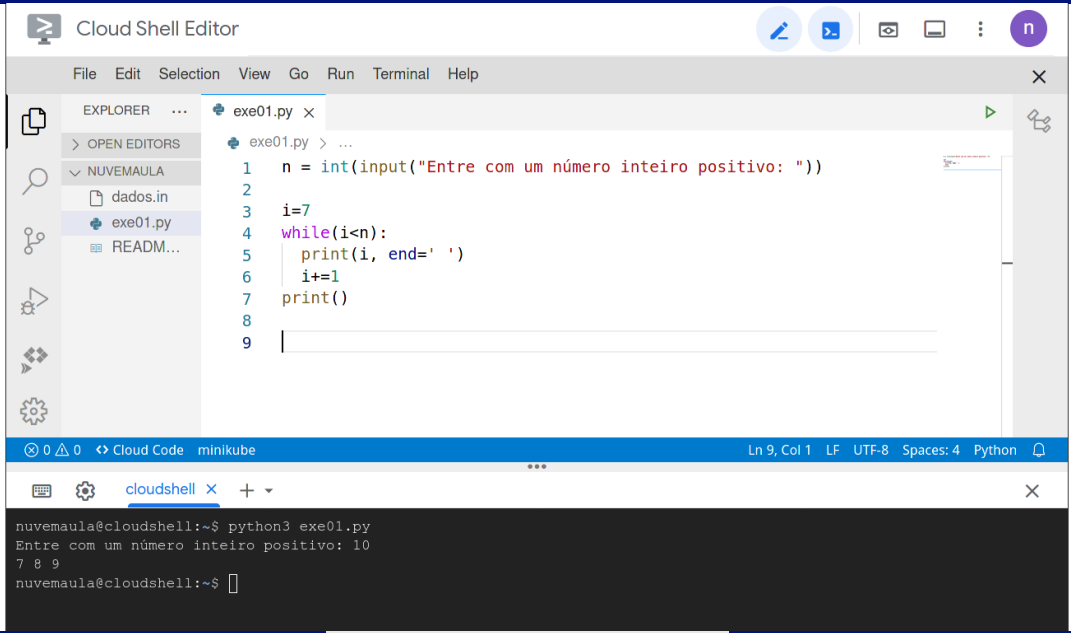
01 - Sequências de Números

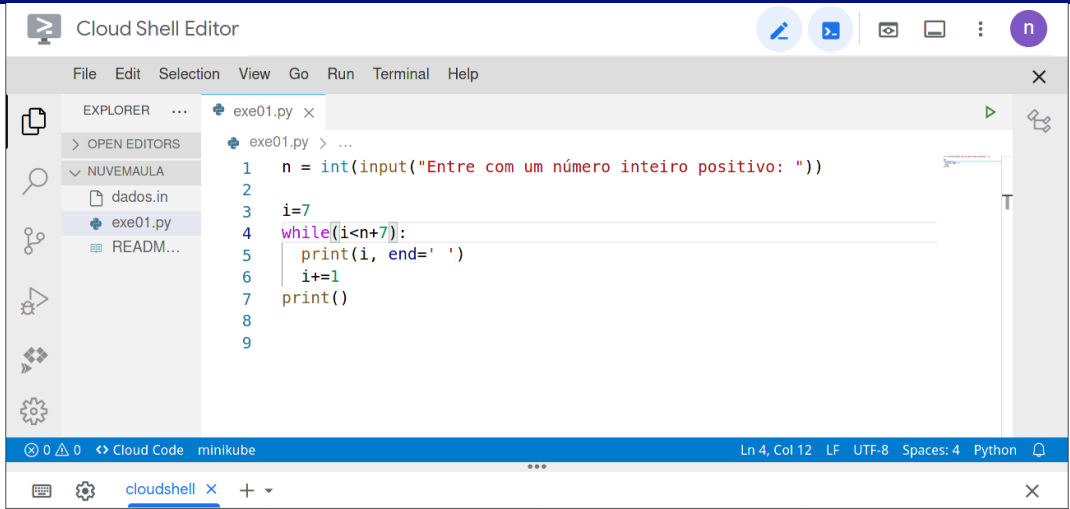
Queremos imprimir os números de 1 até um n dado.


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe01.py
exe01.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 i=0
4 while(i<n):
5 print(i+1, end=' ')
6 i+=1
7
8
9
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe01.py
Entre com um número inteiro positivo: 5
1 2 3 4 5 nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe01.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe01.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 i=0
4 while(i<n):
5 print(i+1, end=' ')
6 i+=1
7
8
9
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe01.py
Entre com um número inteiro positivo: 10
1 2 3 4 5 6 7 8 9 10
nuvemaula@cloudshell:~$

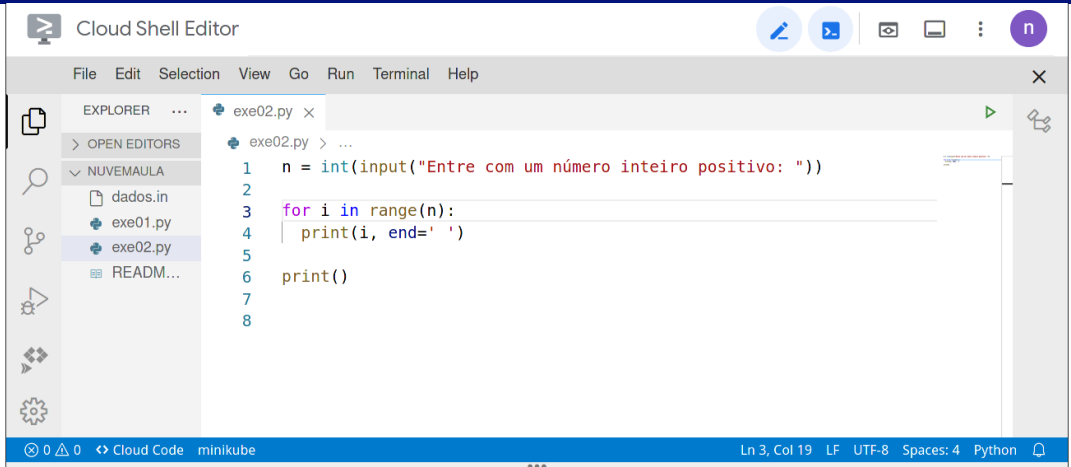

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
READM...
exe01.py
exe01.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 i=0
4 while(i<n):
5 print(i+1, end=' ')
6 i+=1
7 print()
8
9
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe01.py
Entre com um número inteiro positivo: 10
1 2 3 4 5 6 7 8 9 10
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe01.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
READM...
exe01.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 i=7
4 while(i<n):
5 print(i, end=' ')
6 i+=1
7 print()
8
9
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe01.py
Entre com um número inteiro positivo: 10
7 8 9
nuvemaula@cloudshell:~$

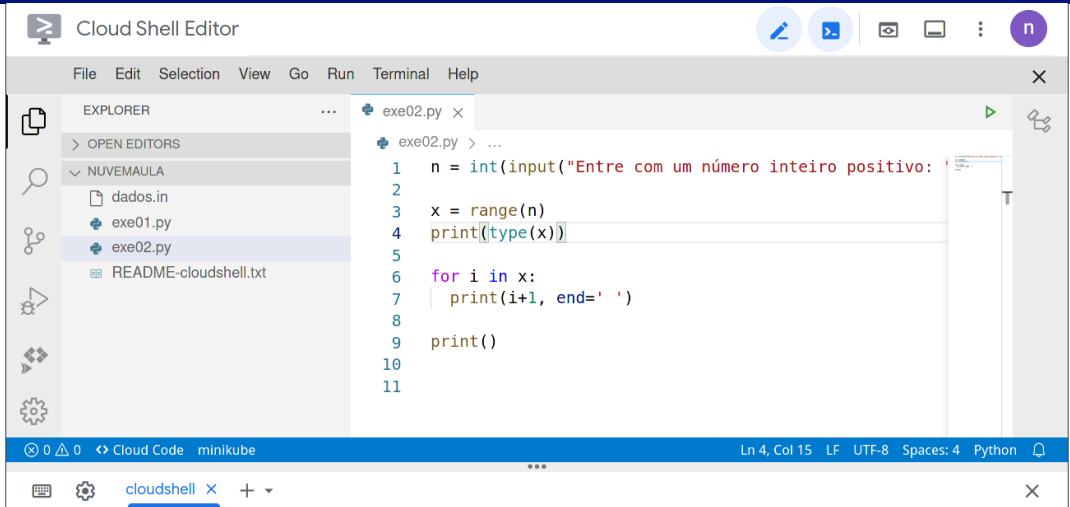

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe01.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
READM...
exe01.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 i=7
4 while(i<n+7):
5 print(i, end=' ')
6 i+=1
7 print()
8
9
0 0 Cloud Code minikube
Ln 4, Col 12 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe01.py
Entre com um número inteiro positivo: 7
7 8 9 10 11 12 13
nuvemaula@cloudshell:~$

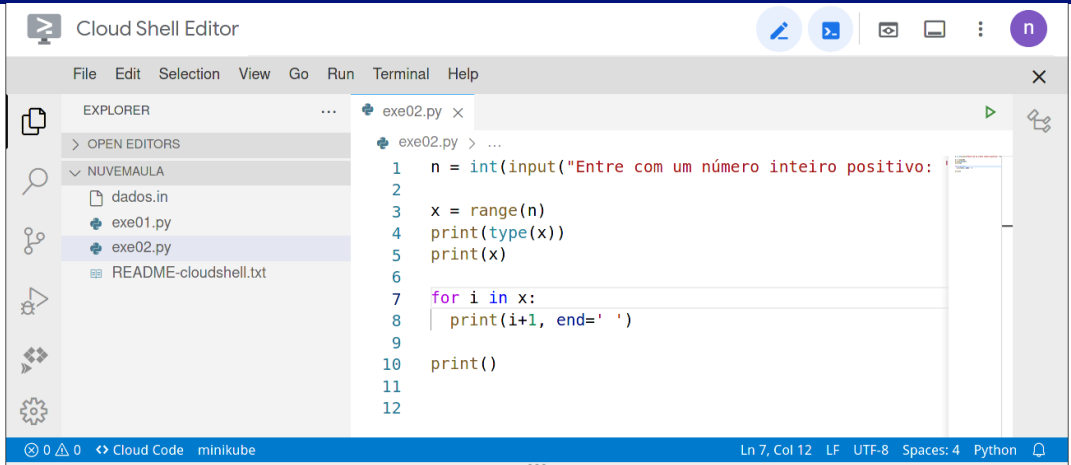

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe01.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
READM...
exe01.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 i=7
4 while(i<n+7):
5 print(i-7, end=' ')
6 i+=1
7 print()
8
9
0 0 Cloud Code minikube
Ln 5, Col 12 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe01.py
Entre com um número inteiro positivo: 7
0 1 2 3 4 5 6
nuvemaula@cloudshell:~$

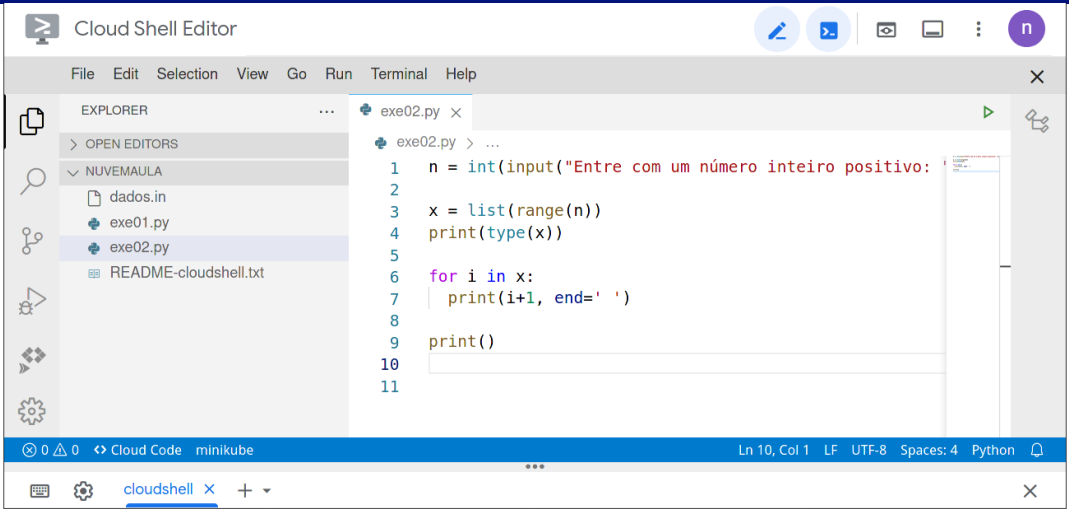

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe01.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
READM...
exe01.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 i=7
4 while(i<n+7):
5 print(i-7+1, end=' ')
6 i+=1
7 print()
8
9
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe01.py
Entre com um número inteiro positivo: 7
1 2 3 4 5 6 7
nuvemaula@cloudshell:~$

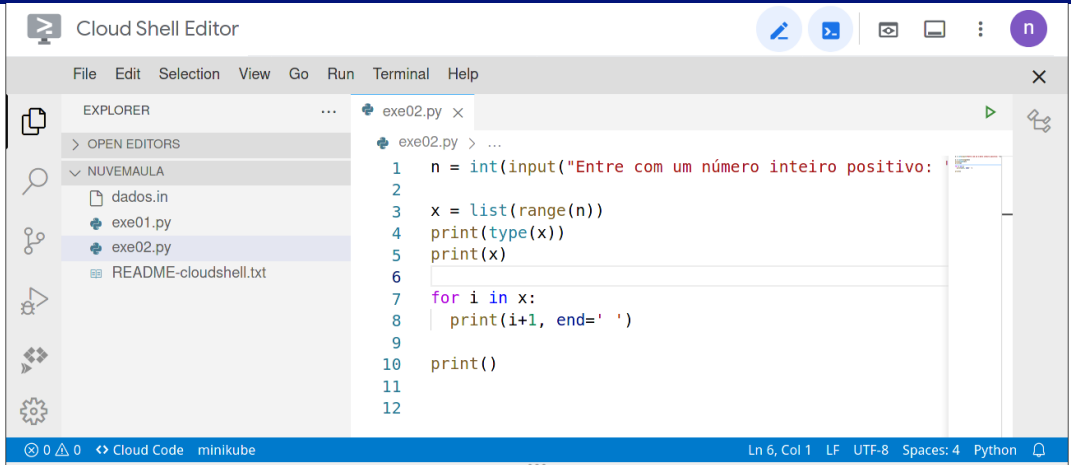

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
READM...
exe02.py
exe02.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 for i in range(n):
4 print(i, end=' ')
5
6 print()
7
8
0 0 Cloud Code minikube
Ln 3, Col 19 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe02.py
Entre com um número inteiro positivo: 5
0 1 2 3 4
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe02.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
READM...
exe02.py > ...
1 n = int(input("Entre com um número inteiro positivo: "))
2
3 for i in range(n):
4 print(i+1, end=' ')
5
6 print()
7
8
0 0 Cloud Code minikube
Ln 4, Col 12 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe02.py
Entre com um número inteiro positivo: 5
1 2 3 4 5
nuvemaula@cloudshell:~$

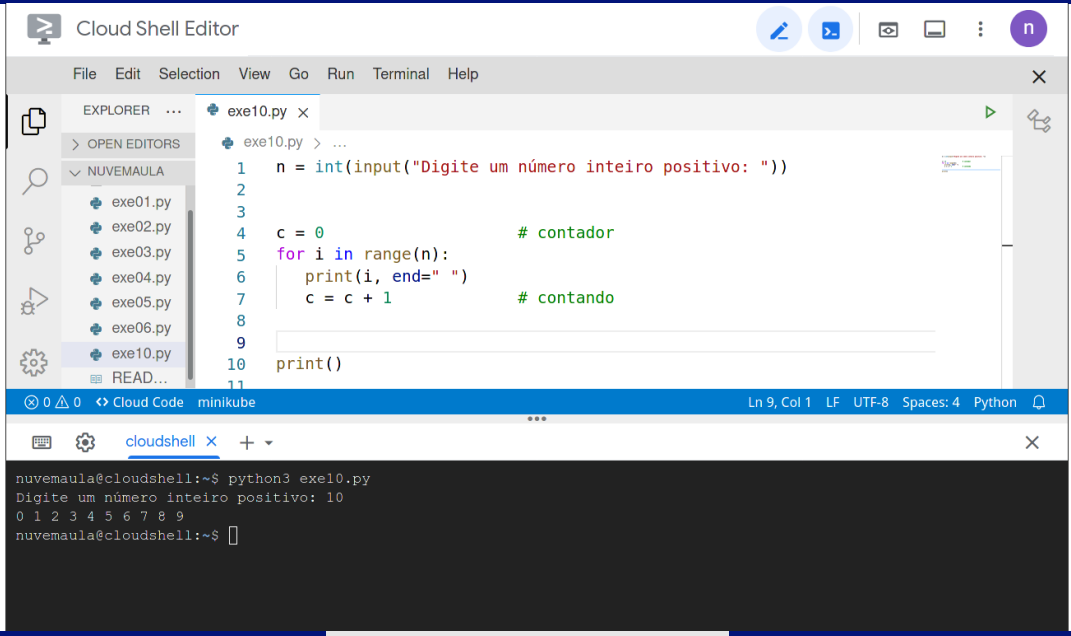

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
README-cloudshell.txt
exe02.py
exe02.py > ...
1 n = int(input("Entre com um número inteiro positivo:
2
3 x = range(n)
4 print(type(x))
5
6 for i in x:
7 print(i+1, end=' ')
8
9 print()
10
11
0 0 Cloud Code minikube
Ln 4, Col 15 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe02.py
Entre com um número inteiro positivo: 5
<class 'range'>
1 2 3 4 5
nuvemaula@cloudshell:~$

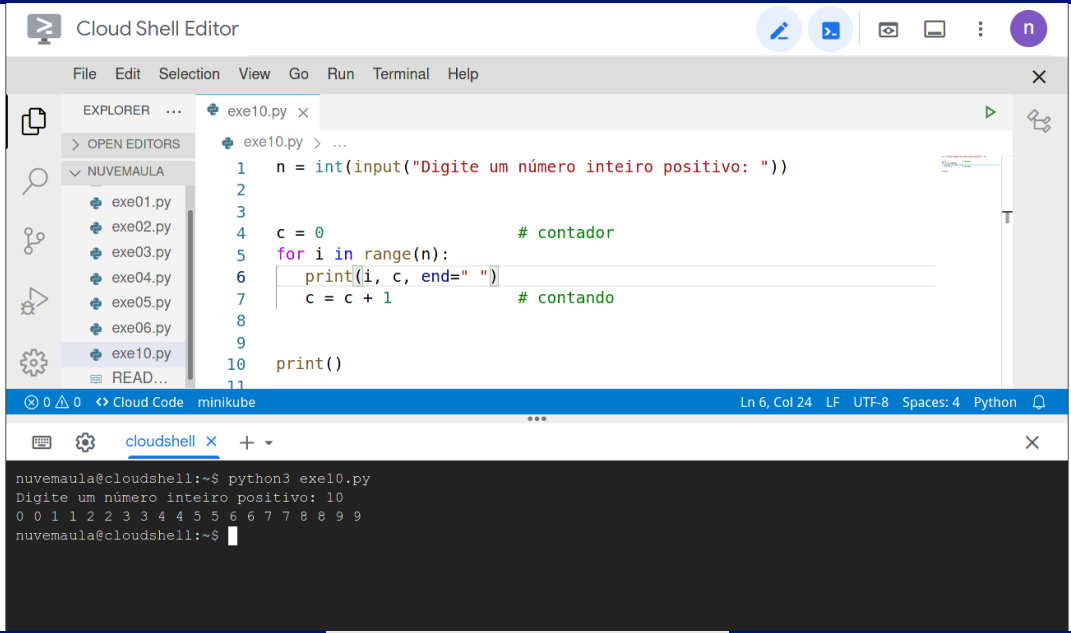

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
README-cloudshell.txt
exe02.py
exe02.py > ...
1 n = int(input("Entre com um número inteiro positivo:
2
3 x = range(n)
4 print(type(x))
5 print(x)
6
7 for i in x:
8 print(i+1, end=' ')
9
10 print()
11
12
0 0 Cloud Code minikube
Ln 7, Col 12 LF UTF-8 Spaces: 4 Python
cloudshell
Entre com um número inteiro positivo: 5
<class 'range'>
range(0, 5)
1 2 3 4 5
nuvemaula@cloudshell:~$

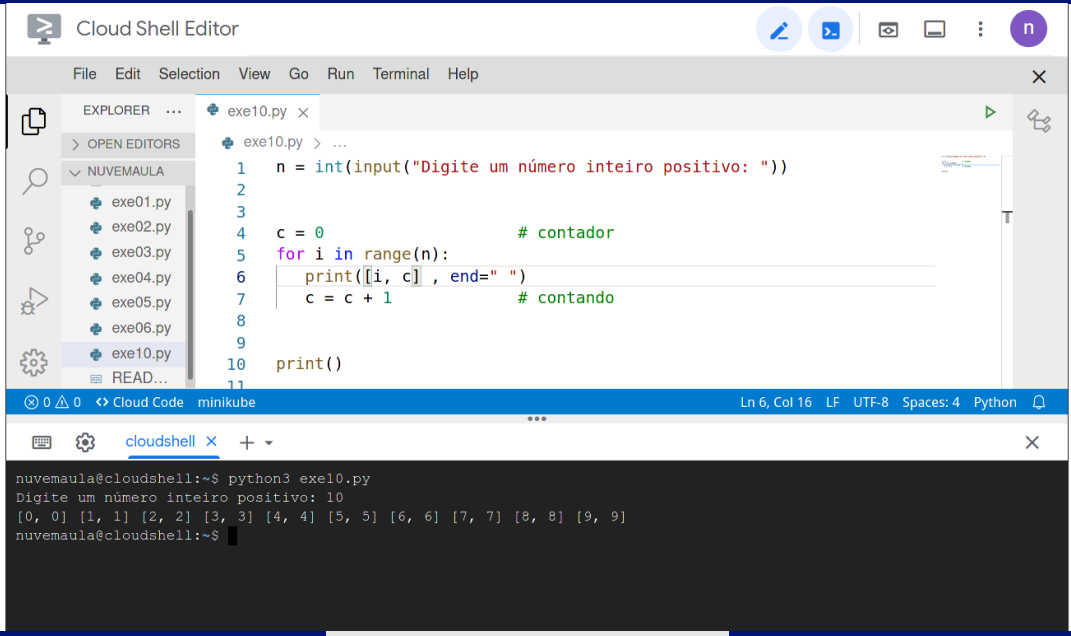

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
README-cloudshell.txt
exe02.py
exe02.py > ...
1 n = int(input("Entre com um número inteiro positivo:
2
3 x = list(range(n))
4 print(type(x))
5
6 for i in x:
7 print(i+1, end=' ')
8
9 print()
10
11
Ln 10, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe02.py
Entre com um número inteiro positivo: 5
<class 'list'>
1 2 3 4 5
nuvemaula@cloudshell:~$

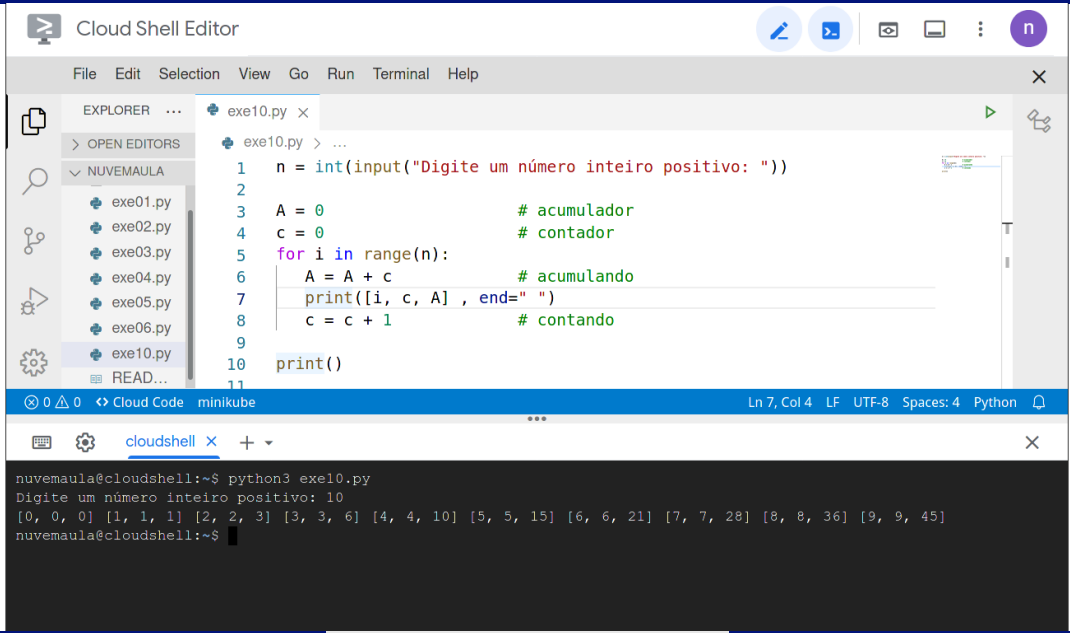

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
README-cloudshell.txt
exe02.py
exe02.py > ...
1 n = int(input("Entre com um número inteiro positivo:
2
3 x = list(range(n))
4 print(type(x))
5 print(x)
6
7 for i in x:
8 print(i+1, end=' ')
9
10 print()
11
12
0 0 Cloud Code minikube
Ln 6, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
Entre com um número inteiro positivo: 5
<class 'list'>
[0, 1, 2, 3, 4]
1 2 3 4 5
nuvemaula@cloudshell:~$

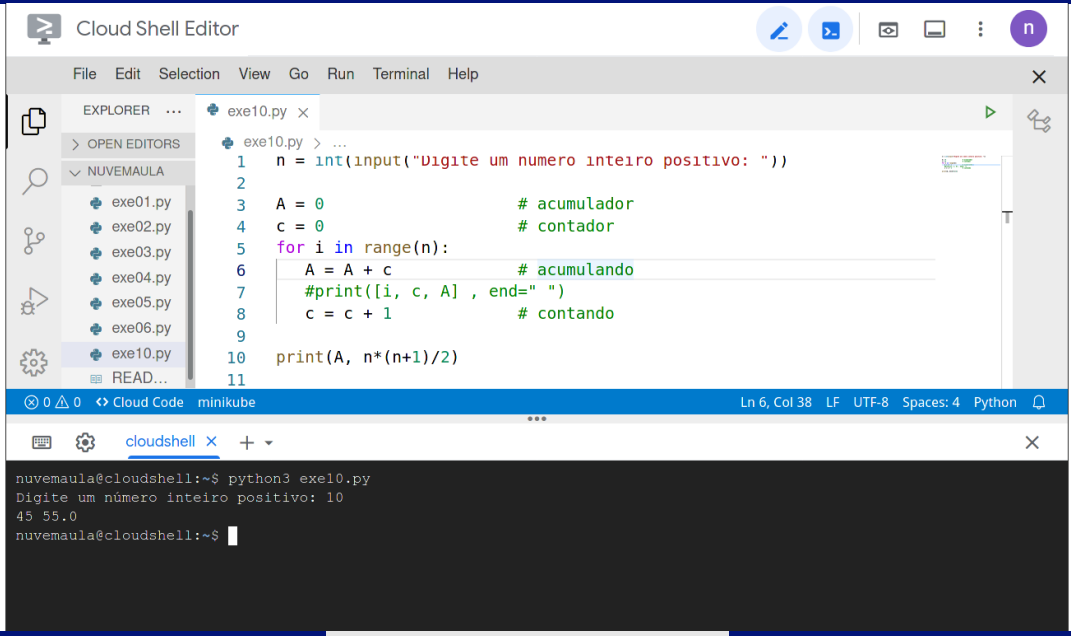
02 - Contadores e Acumuladores

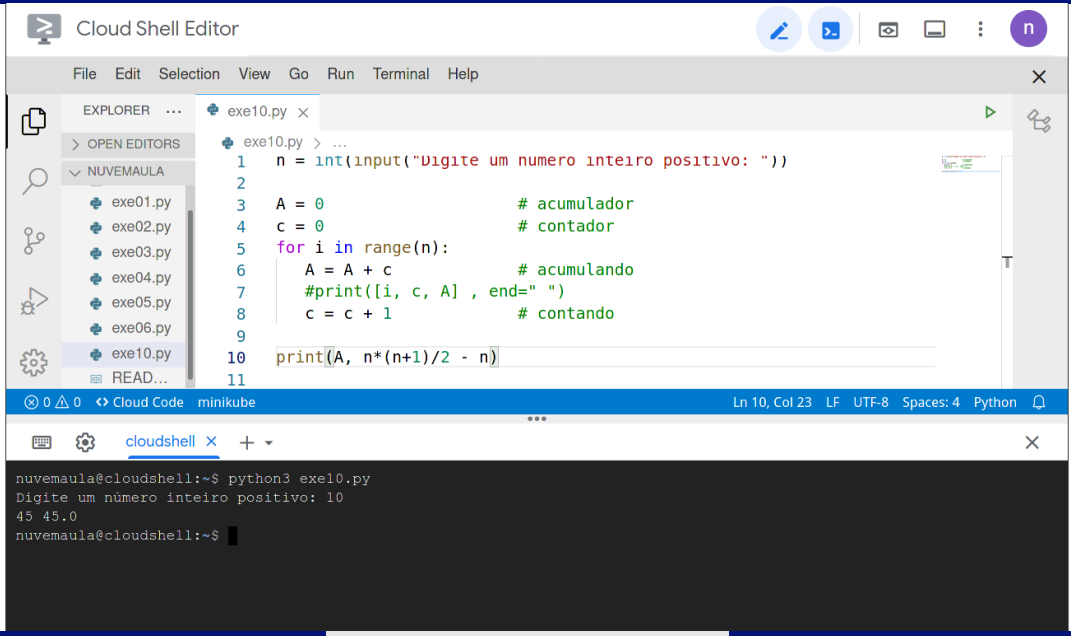

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
4 c = 0 # contador
5 for i in range(n):
6 print(i, end=" ")
7 c = c + 1 # contando
10 print()
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
0 1 2 3 4 5 6 7 8 9
nuvemaula@cloudshell:~$

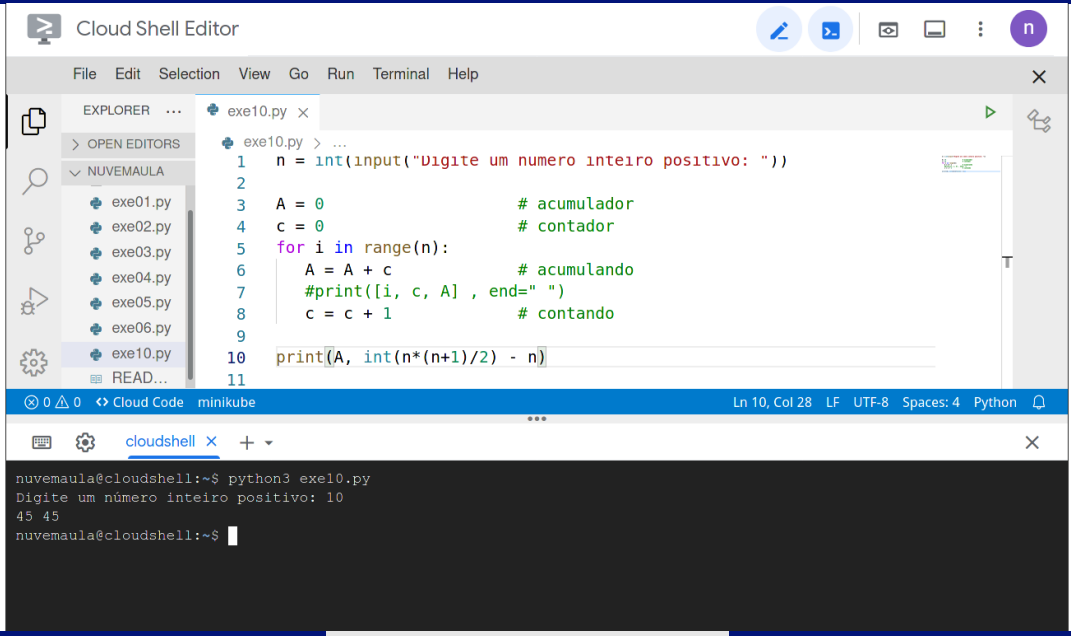

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3
4 c = 0 # contador
5 for i in range(n):
6 print(i, c, end=" ")
7 c = c + 1 # contando
8
9
10 print()
11
Ln 6, Col 24 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
0 0 1 1 2 2 3 3 4 4 5 5 6 6 7 7 8 8 9 9
nuvemaula@cloudshell:~$

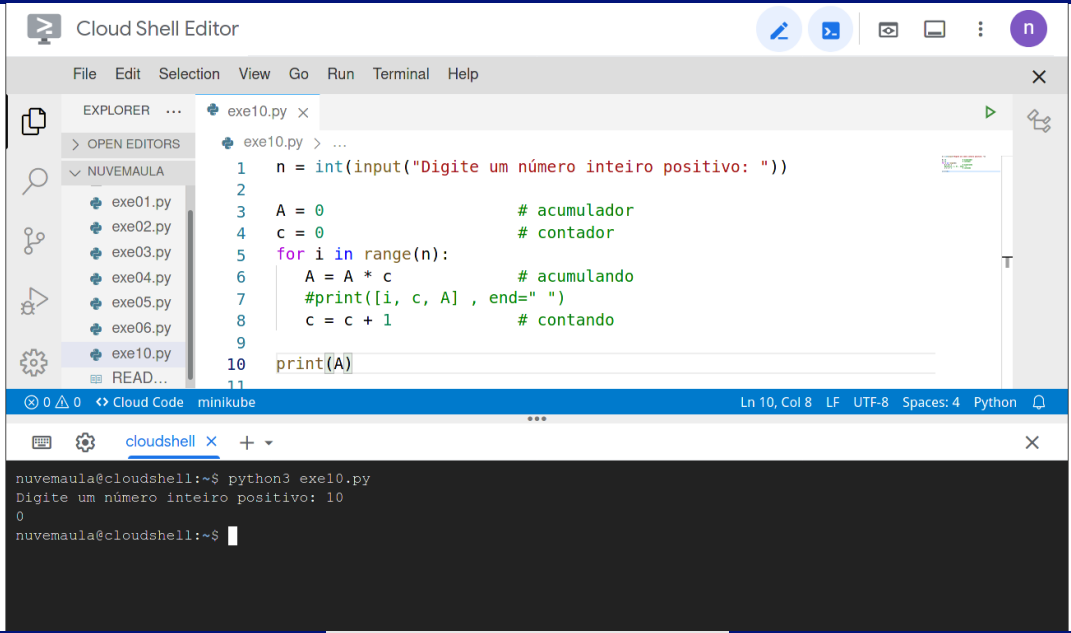

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
n = int(input("Digite um número inteiro positivo: "))
c = 0 # contador
for i in range(n):
print([i, c] , end=" ")
c = c + 1 # contando
print()
Cloud Code minikube
Ln 6, Col 16 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
[0, 0] [1, 1] [2, 2] [3, 3] [4, 4] [5, 5] [6, 6] [7, 7] [8, 8] [9, 9]
nuvemaula@cloudshell:~$

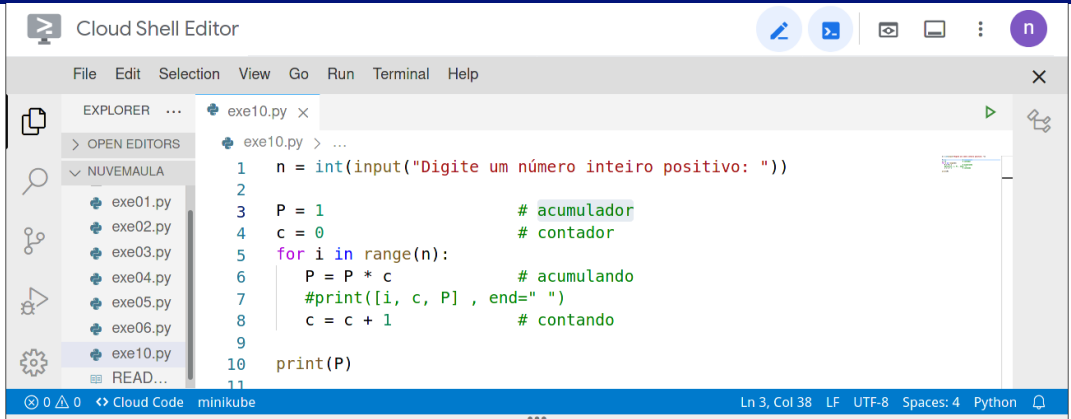

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 A = 0 # acumulador
4 c = 0 # contador
5 for i in range(n):
6 A = A + c # acumulando
7 print([i, c, A] , end=" ")
8 c = c + 1 # contando
9
10 print()
11
0 0 Cloud Code minikube
Ln 7, Col 4 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
[0, 0, 0] [1, 1, 1] [2, 2, 3] [3, 3, 6] [4, 4, 10] [5, 5, 15] [6, 6, 21] [7, 7, 28] [8, 8, 36] [9, 9, 45]
nuvemaula@cloudshell:~$

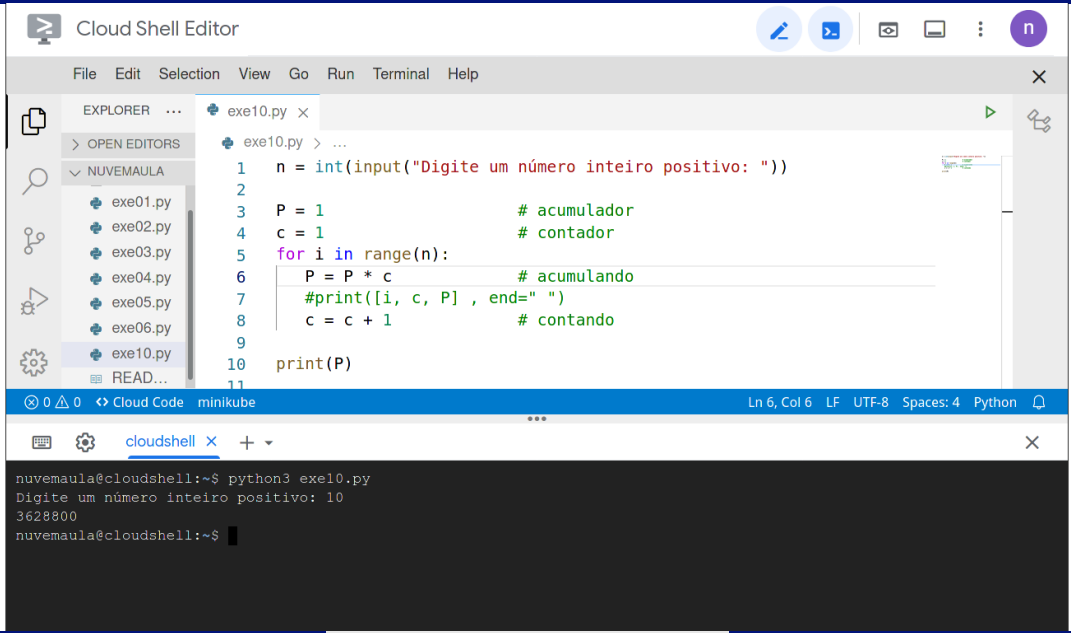

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um numero inteiro positivo: "))
2
3 A = 0 # acumulador
4 c = 0 # contador
5 for i in range(n):
6 A = A + c # acumulando
7 #print([i, c, A] , end=" ")
8 c = c + 1 # contando
9
10 print(A, n*(n+1)/2)
11
0 0 Cloud Code minikube
Ln 6, Col 38 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
45 55.0
nuvemaula@cloudshell:~$

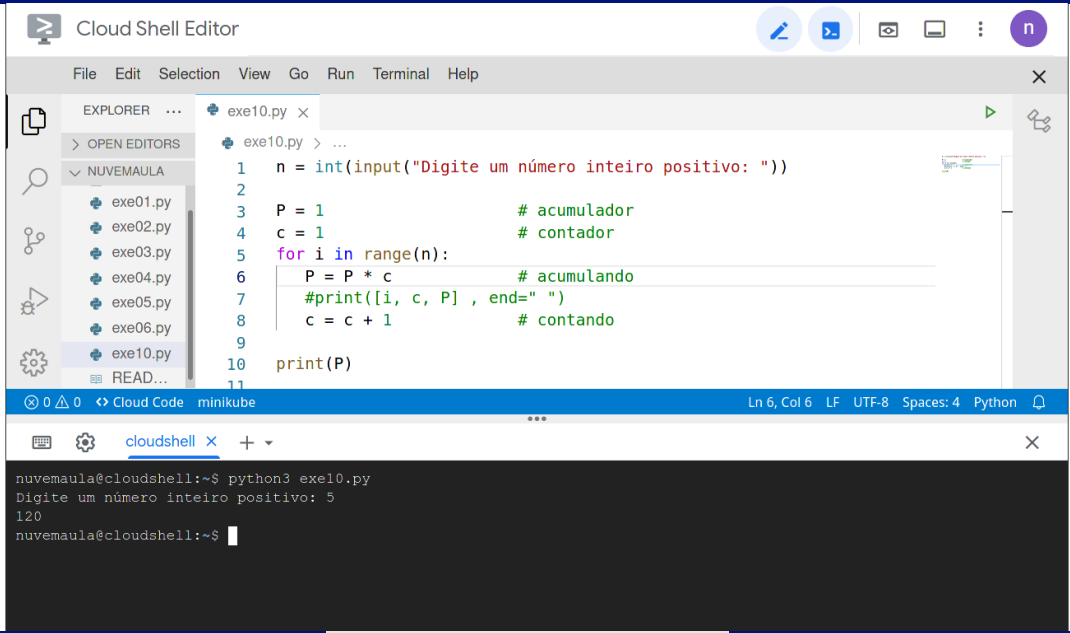

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
n = int(input("Digite um numero inteiro positivo: "))
A = 0 # acumulador
c = 0 # contador
for i in range(n):
A = A + c # acumulando
#print([i, c, A] , end=" ")
c = c + 1 # contando
print(A, n*(n+1)/2 - n)
Ln 10, Col 23 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
45 45.0
nuvemaula@cloudshell:~$

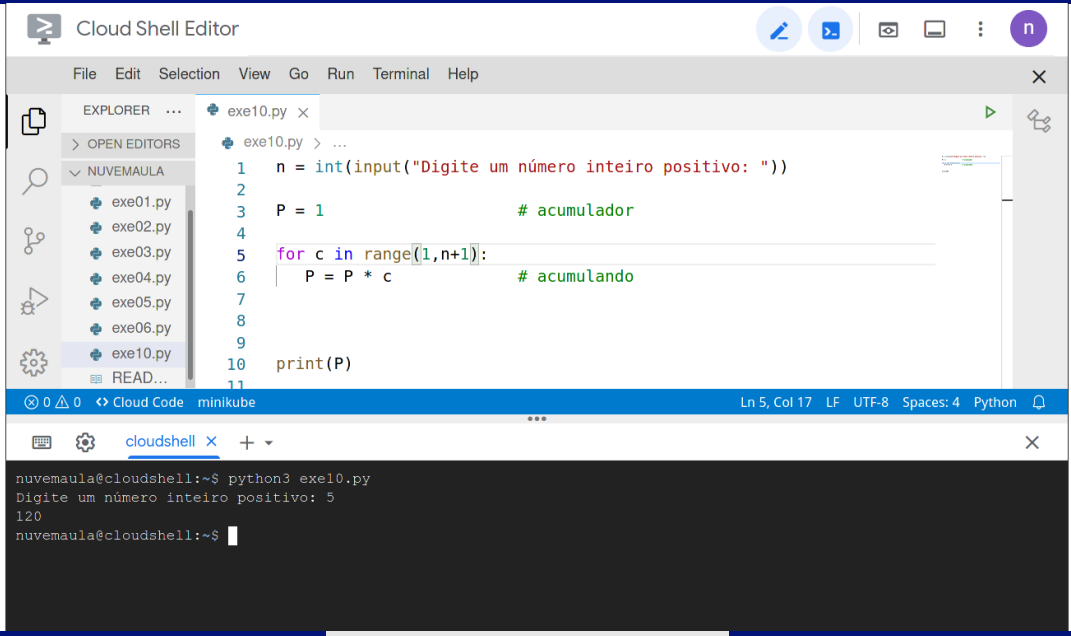

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um numero inteiro positivo: "))
2
3 A = 0 # acumulador
4 c = 0 # contador
5 for i in range(n):
6 A = A + c # acumulando
7 #print([i, c, A] , end=" ")
8 c = c + 1 # contando
9
10 print(A, int(n*(n+1)/2) - n)
11
0 0 Cloud Code minikube
Ln 10, Col 28 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
45 45
nuvemaula@cloudshell:~$

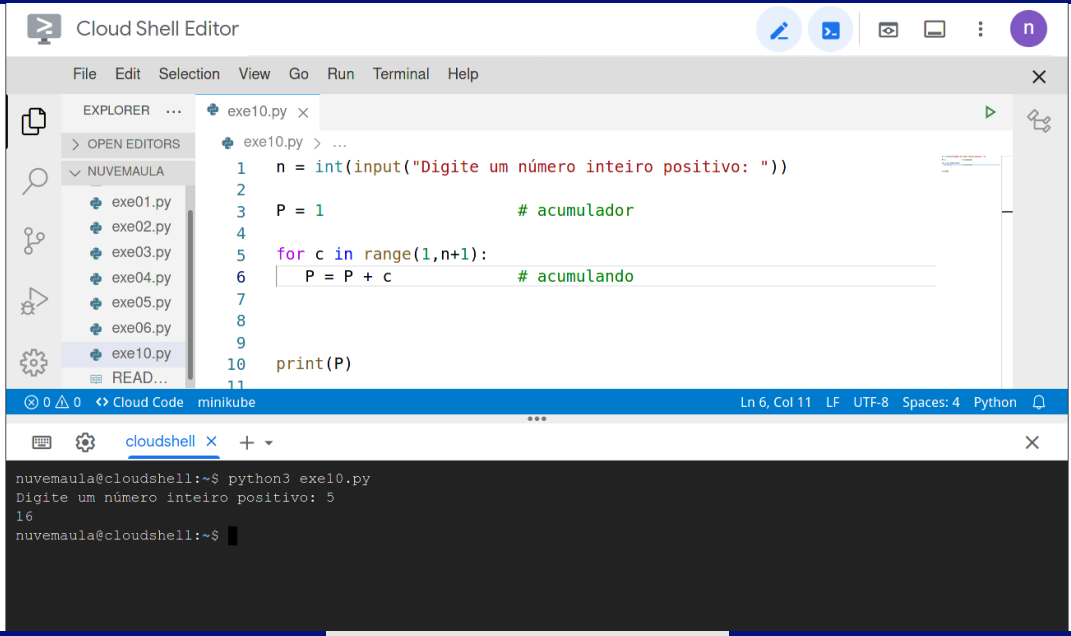

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
n = int(input("Digite um número inteiro positivo: "))
A = 0 # acumulador
c = 0 # contador
for i in range(n):
A = A * c # acumulando
#print([i, c, A] , end=" ")
c = c + 1 # contando
print(A)
Cloud Code minikube
Ln 10, Col 8 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
0
nuvemaula@cloudshell:~$

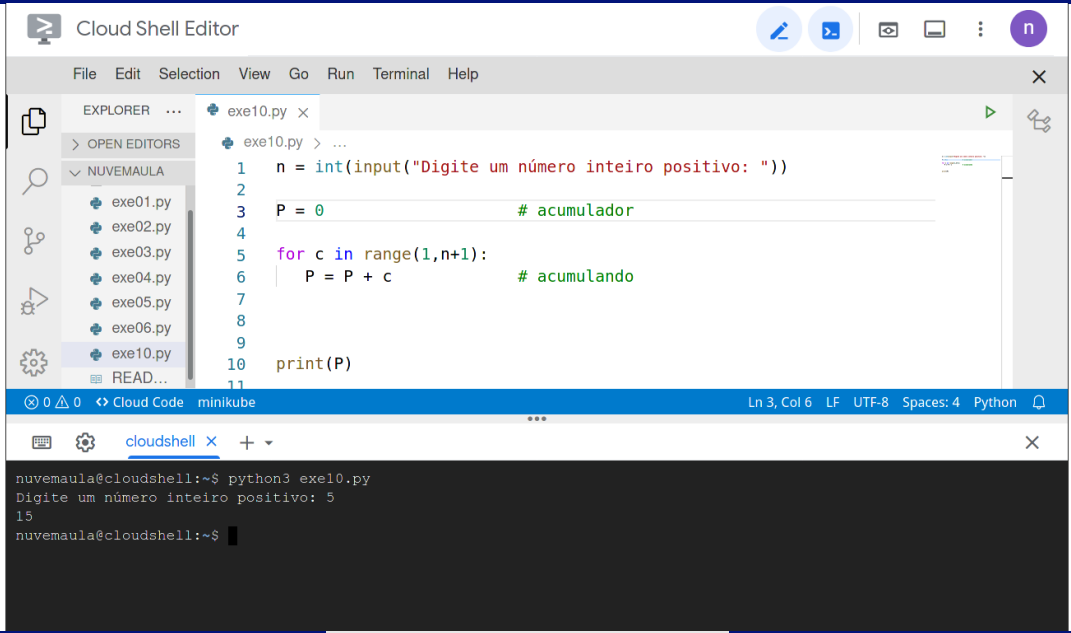

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
n = int(input("Digite um número inteiro positivo: "))
P = 1 # acumulador
c = 0 # contador
for i in range(n):
P = P * c # acumulando
#print([i, c, P] , end=" ")
c = c + 1 # contando
print(P)
Ln 3, Col 38 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
0
nuvemaula@cloudshell:~$

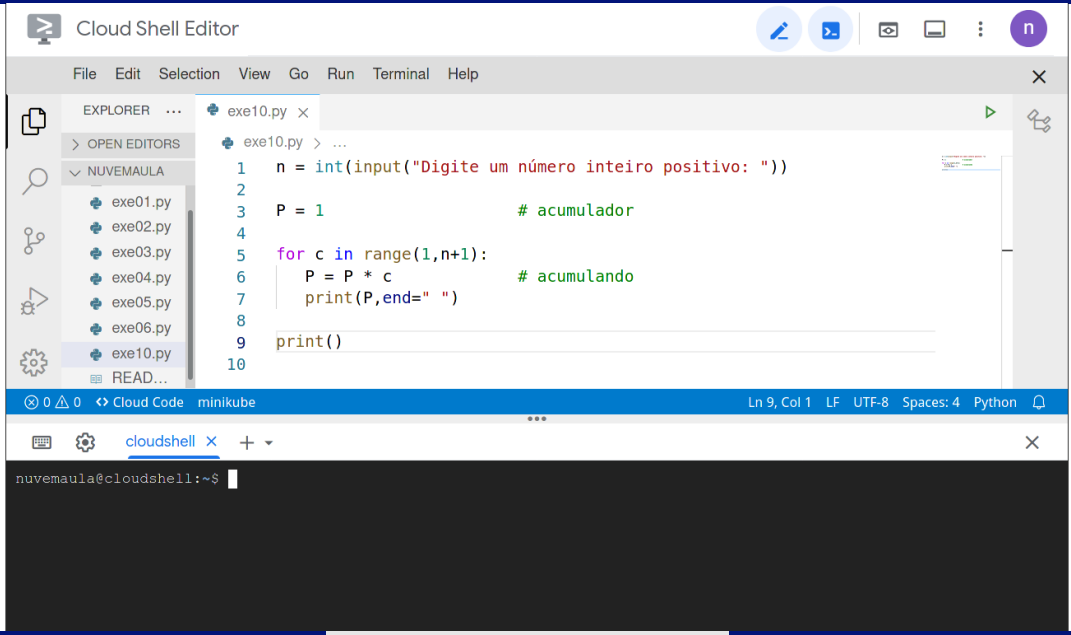

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 1 # acumulador
4 c = 1 # contador
5 for i in range(n):
6 P = P * c # acumulando
7 #print([i, c, P] , end=" ")
8 c = c + 1 # contando
9
10 print(P)
11
0 0 Cloud Code minikube
Ln 6, Col 6 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
3628800
nuvemaula@cloudshell:~$

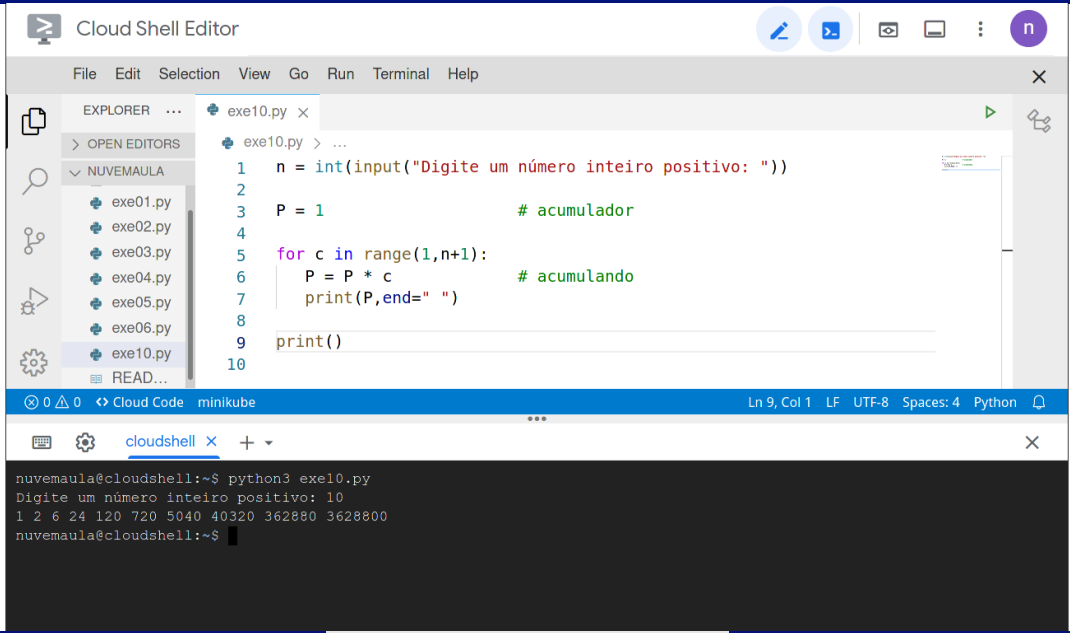

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 1 # acumulador
4 c = 1 # contador
5 for i in range(n):
6 P = P * c # acumulando
7 #print([i, c, P] , end=" ")
8 c = c + 1 # contando
9
10 print(P)
11
0 0 Cloud Code minikube
Ln 6, Col 6 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 5
120
nuvemaula@cloudshell:~$

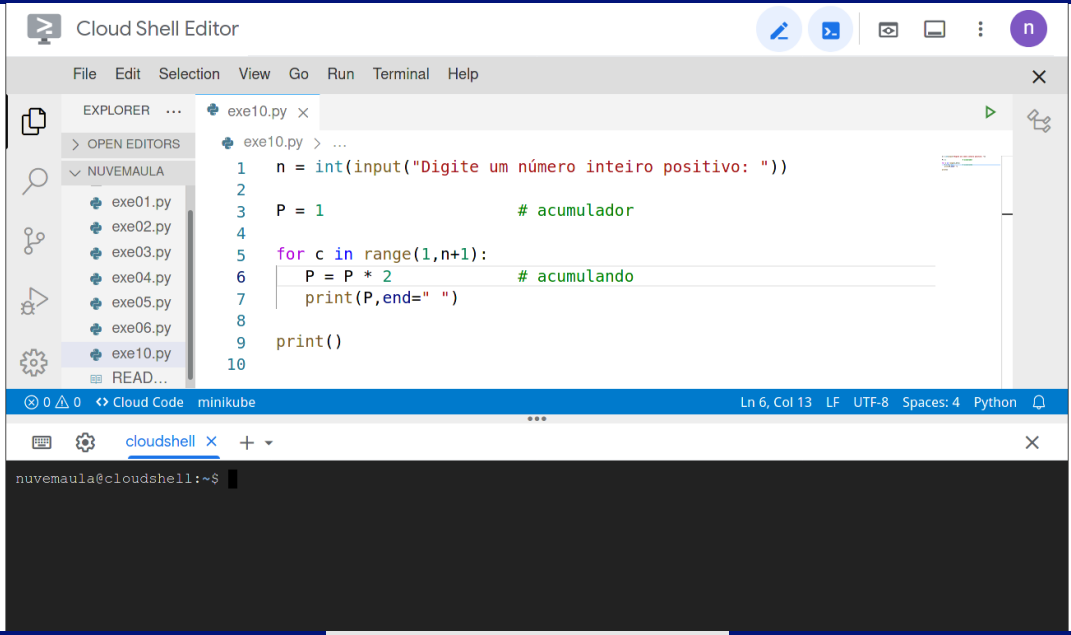

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
n = int(input("Digite um número inteiro positivo: "))
P = 1 # acumulador
for c in range(1,n+1):
P = P * c # acumulando
print(P)
Ln 5, Col 17 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 5
120
nuvemaula@cloudshell:~$

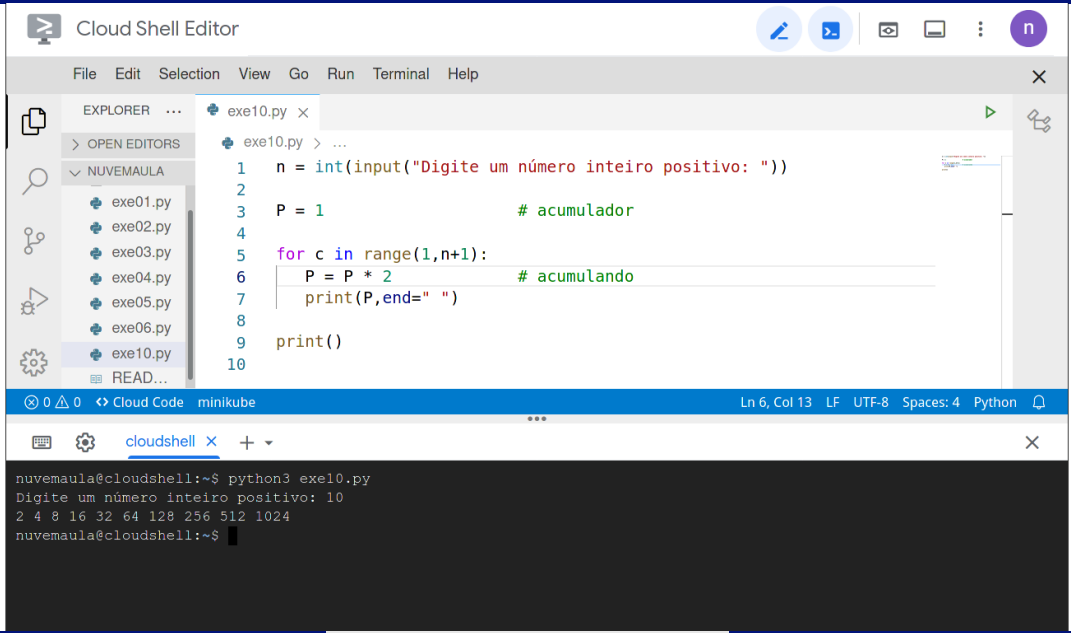

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 1 # acumulador
4
5 for c in range(1,n+1):
6 P = P + c # acumulando
7
8
9
10 print(P)
11
0 0 Cloud Code minikube
Ln 6, Col 11 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 5
16
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 0 # acumulador
4
5 for c in range(1,n+1):
6 P = P + c # acumulando
7
8
9
10 print(P)
11
0 0 Cloud Code minikube
Ln 3, Col 6 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 5
15
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 1 # acumulador
4
5 for c in range(1,n+1):
6 P = P * c # acumulando
7 print(P,end=" ")
8
9 print()
10
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$

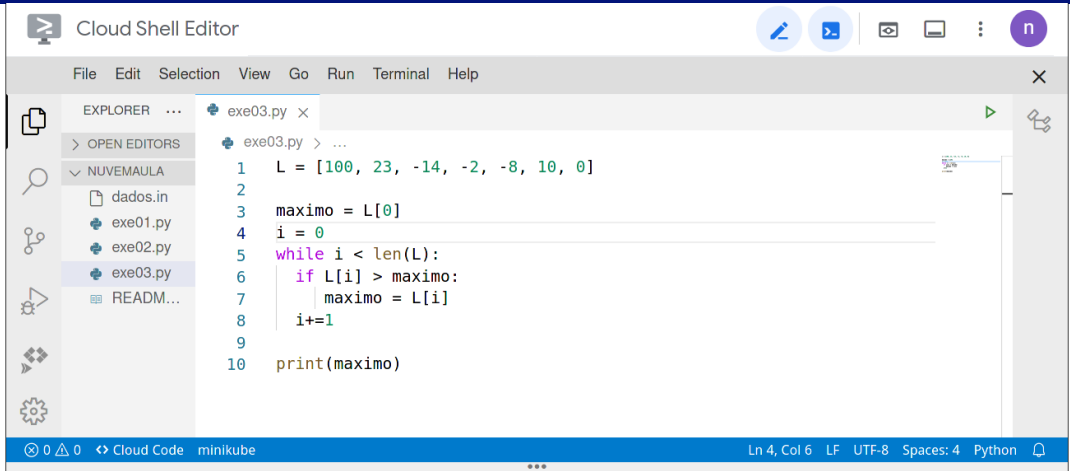

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 1 # acumulador
4
5 for c in range(1,n+1):
6 P = P * c # acumulando
7 print(P,end=" ")
8
9 print()
10
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
1 2 6 24 120 720 5040 40320 362880 3628800
nuvemaula@cloudshell:~$

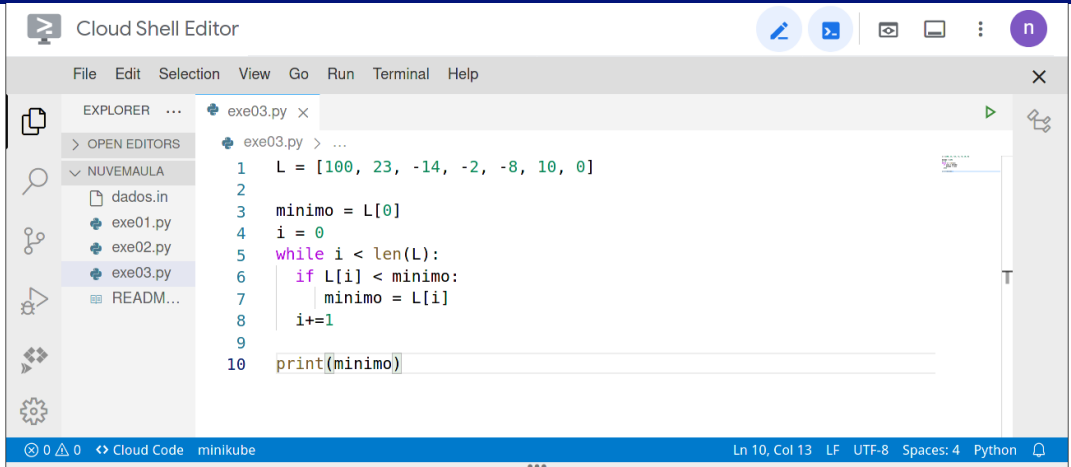

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 1 # acumulador
4
5 for c in range(1,n+1):
6 P = P * 2 # acumulando
7 print(P,end=" ")
8
9 print()
10
0 0 Cloud Code minikube
Ln 6, Col 13 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$

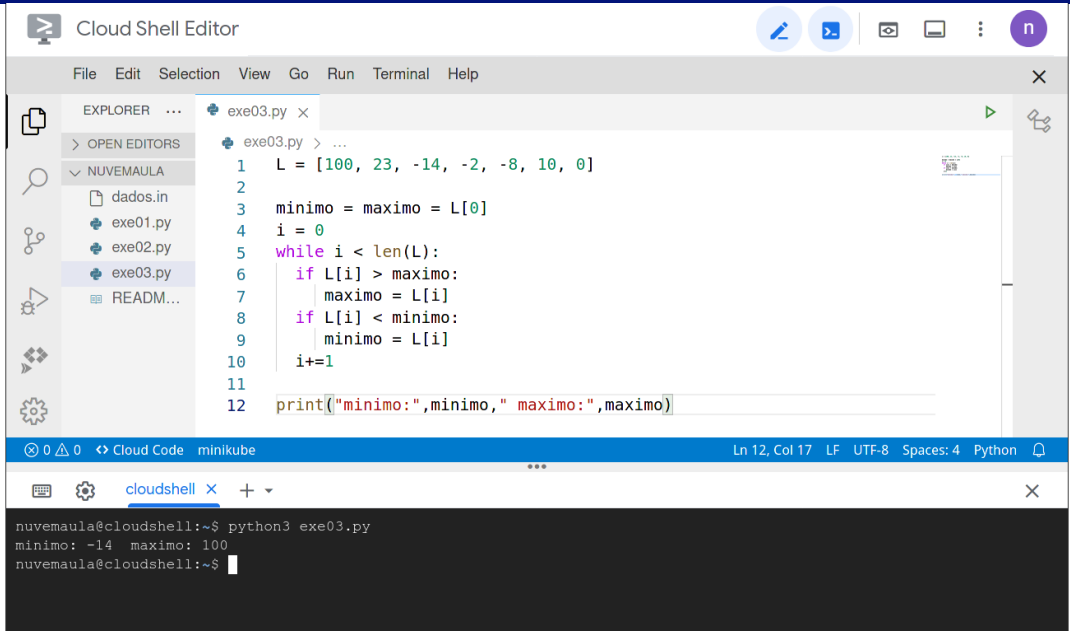

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe10.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
READ...
exe10.py > ...
1 n = int(input("Digite um número inteiro positivo: "))
2
3 P = 1 # acumulador
4
5 for c in range(1,n+1):
6 P = P * 2 # acumulando
7 print(P,end=" ")
8
9 print()
10
0 0 Cloud Code minikube
Ln 6, Col 13 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe10.py
Digite um número inteiro positivo: 10
2 4 8 16 32 64 128 256 512 1024
nuvemaula@cloudshell:~$

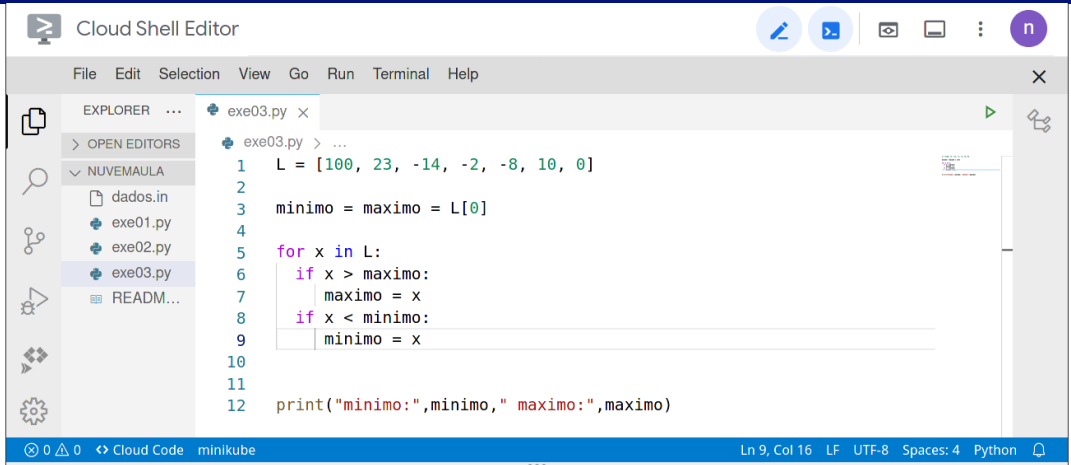
03 - Máximo e Mínimo

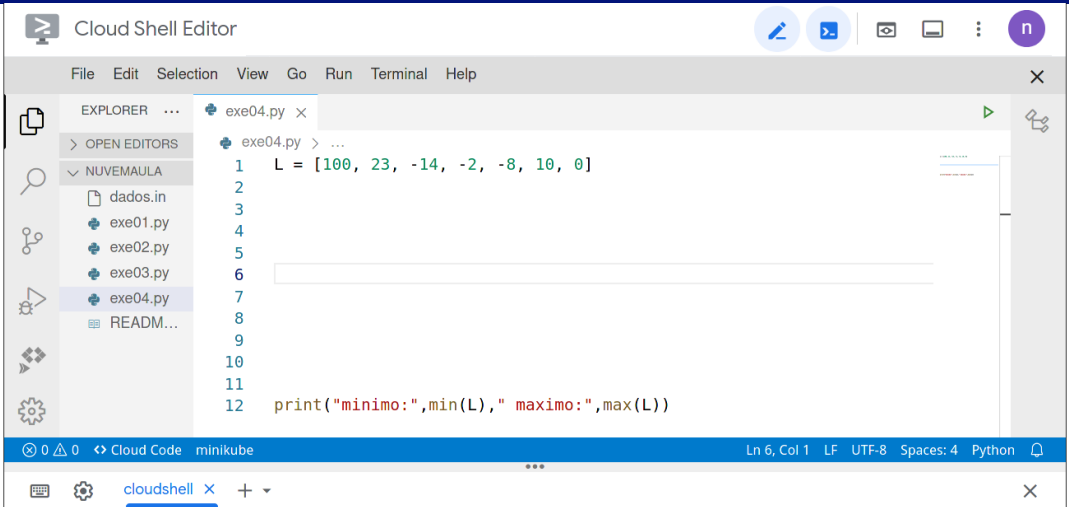
Encontrando o máximo de um conjunto de números.

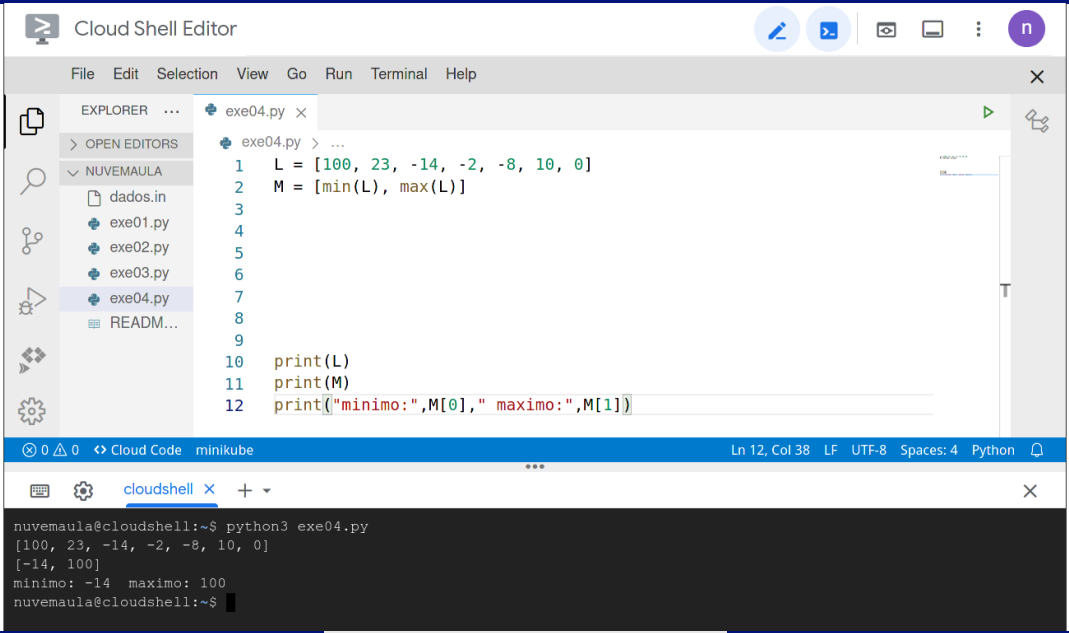

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe03.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
READM...
exe03.py > ...
1 L = [100, 23, -14, -2, -8, 10, 0]
2
3 maximo = L[0]
4 i = 0
5 while i < len(L):
6 if L[i] > maximo:
7 maximo = L[i]
8 i+=1
9
10 print(maximo)
0 0 Cloud Code minikube
Ln 4, Col 6 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe03.py
100
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe03.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
READM...
exe03.py > ...
1 L = [100, 23, -14, -2, -8, 10, 0]
2
3 minimo = L[0]
4 i = 0
5 while i < len(L):
6 if L[i] < minimo:
7 minimo = L[i]
8 i+=1
9
10 print(minimo)
0 0 Cloud Code minikube
Ln 10, Col 13 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe03.py
-14
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
READM...
exe03.py
exe03.py > ...
1 L = [100, 23, -14, -2, -8, 10, 0]
2
3 minimo = maximo = L[0]
4 i = 0
5 while i < len(L):
6 if L[i] > maximo:
7 maximo = L[i]
8 if L[i] < minimo:
9 minimo = L[i]
10 i+=1
11
12 print("minimo:",minimo," maximo:",maximo)
0 0 Cloud Code minikube
Ln 12, Col 17 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe03.py
minimo: -14 maximo: 100
nuvemaula@cloudshell:~$

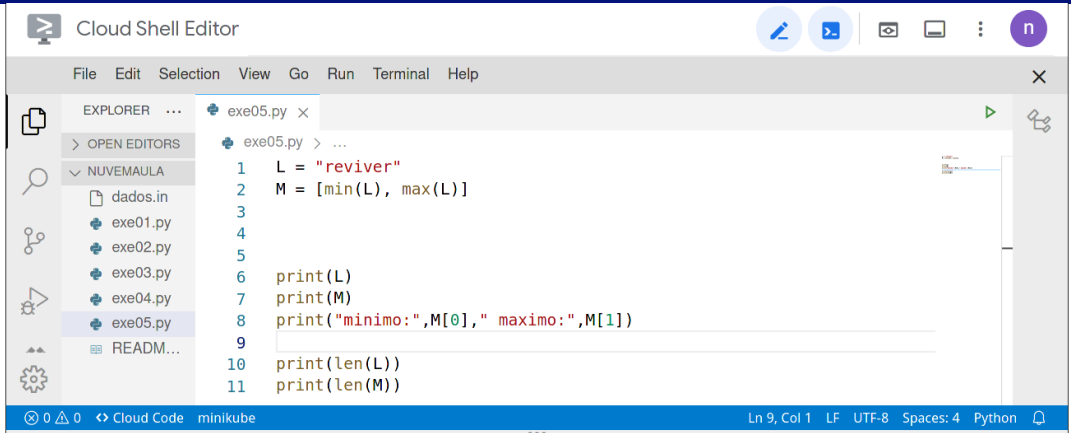

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
READM...
exe03.py
exe03.py > ...
1 L = [100, 23, -14, -2, -8, 10, 0]
2
3 minimo = maximo = L[0]
4
5 for x in L:
6 if x > maximo:
7 maximo = x
8 if x < minimo:
9 minimo = x
10
11
12 print("minimo:",minimo," maximo:",maximo)
0 0 Cloud Code minikube
Ln 9, Col 16 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe03.py
minimo: -14 maximo: 100
nuvemaula@cloudshell:~$

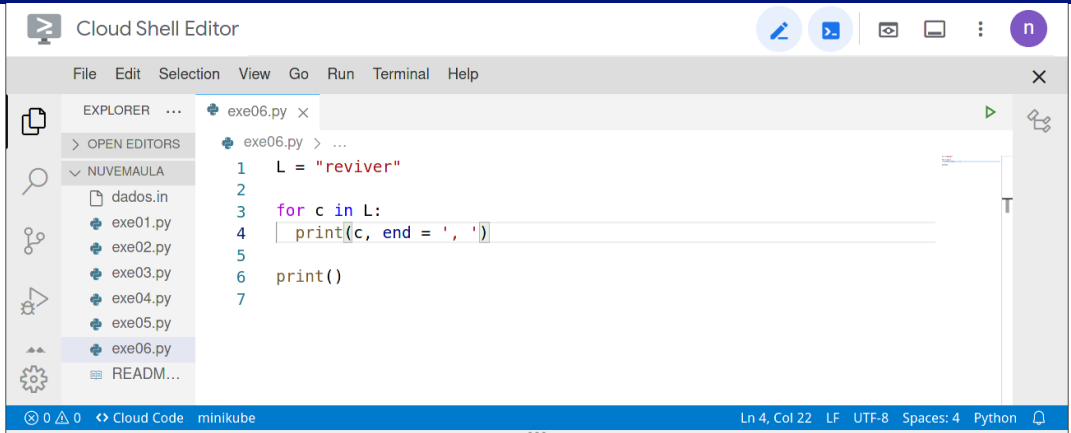

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe04.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
exe04.py
READM...
exe04.py > ...
1 L = [100, 23, -14, -2, -8, 10, 0]
12 print("minimo:",min(L)," maximo:",max(L))
0 0 Cloud Code minikube
Ln 6, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe04.py
minimo: -14 maximo: 100
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe04.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
exe04.py
READM...
1 L = [100, 23, -14, -2, -8, 10, 0]
2 M = [min(L), max(L)]
10 print(L)
11 print(M)
12 print("minimo:",M[0]," maximo:",M[1])
Cloud Code minikube
Ln 12, Col 38 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe04.py
[100, 23, -14, -2, -8, 10, 0]
[-14, 100]
minimo: -14 maximo: 100
nuvemaula@cloudshell:~$

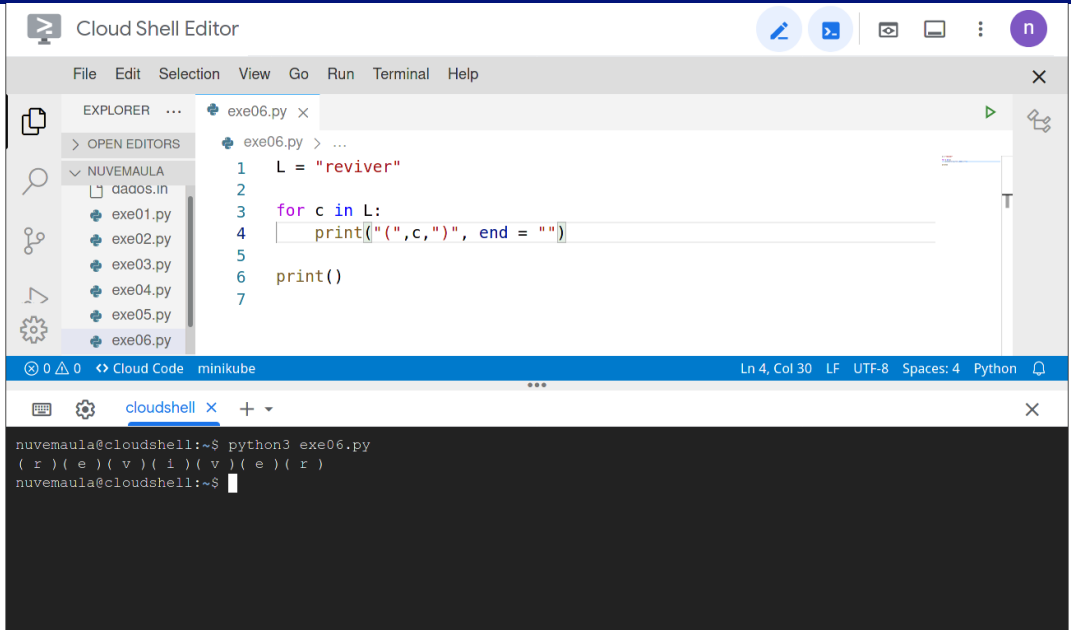
04 - Percorrendo uma String

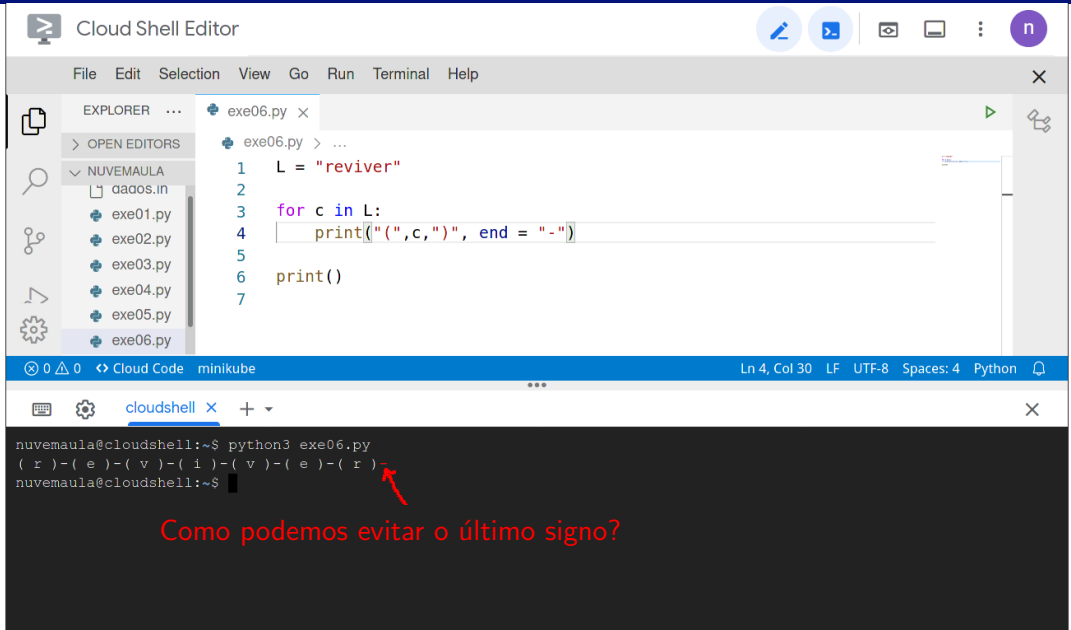

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe05.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
READM...
exe05.py > ...
1 L = "reviver"
2 M = [min(L), max(L)]
10 print(L)
11 print(M)
12 print("minimo:",M[0]," maximo:",M[1])
Cloud Code minikube
Ln 7, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe05.py
reviver
['e', 'v']
minimo: e maximo: v
nuvemaula@cloudshell:~$

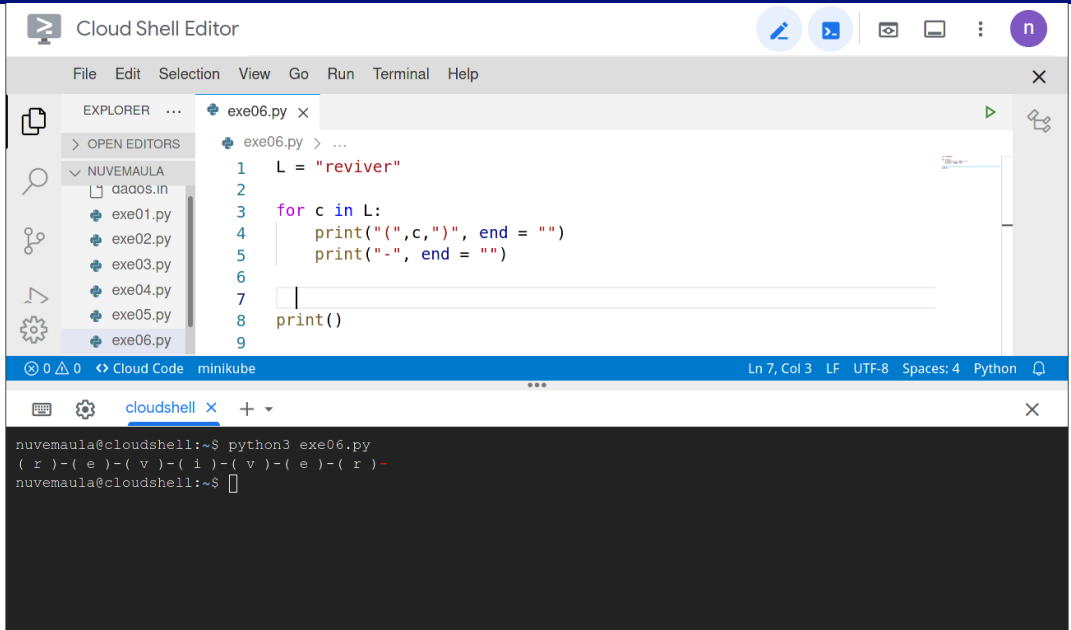

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe05.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
READM...
exe05.py > ...
1 L = "reviver"
2 M = [min(L), max(L)]
6 print(L)
7 print(M)
8 print("minimo:",M[0]," maximo:",M[1])
10 print(len(L))
11 print(len(M))
Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe05.py
reviver
['e', 'v']
minimo: e maximo: v
7
2
nuvemaula@cloudshell:~$

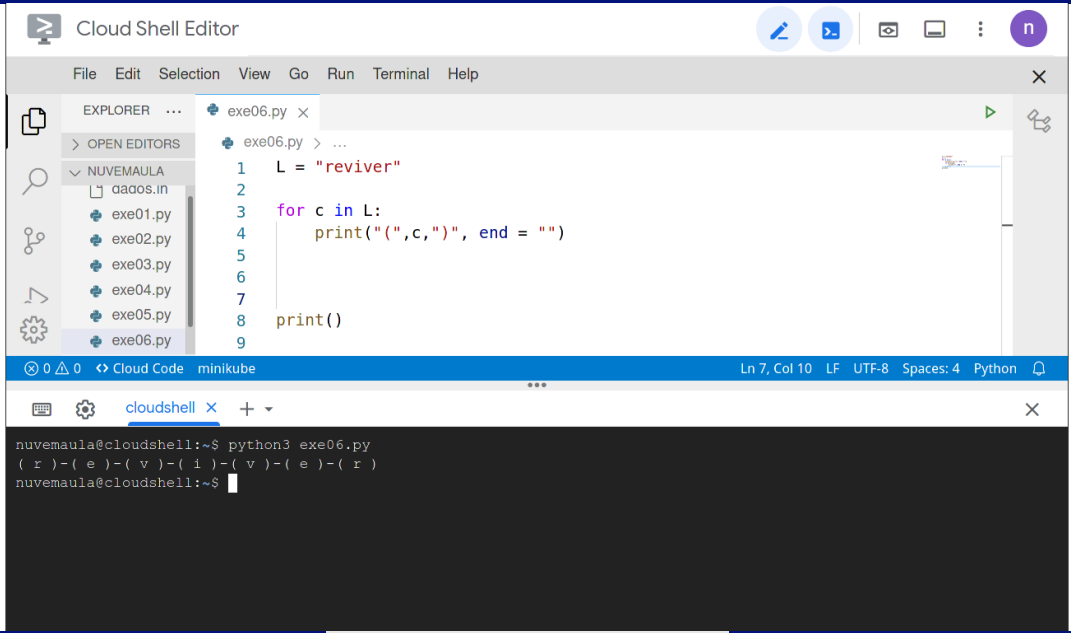

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
READM...
L = "reviver"
for c in L:
print(c, end = ', ')
print()
Cloud Code minikube
Ln 4, Col 22 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
r, e, v, i, v, e, r,
nuvemaula@cloudshell:~$

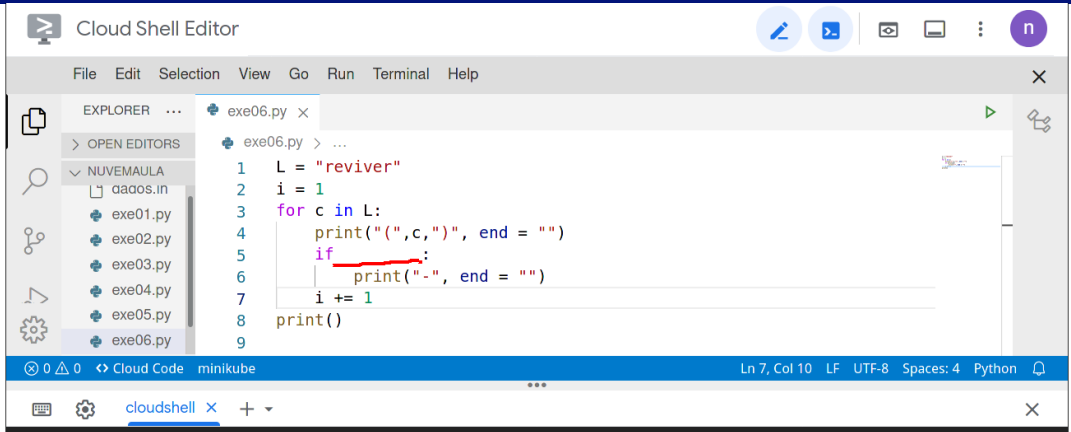

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
for c in L:
print("(",c,")")
print()
Cloud Code
minikube
Ln 6, Col 8
LF
UTF-8
Spaces: 4
Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)
(e)
(v)
(i)
(v)
(e)
(r)
nuvemaula@cloudshell:~$

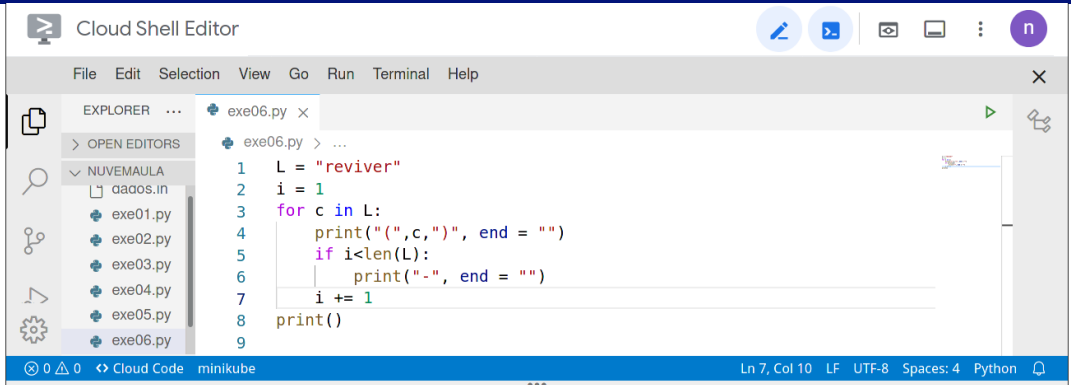

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
for c in L:
print("(",c,")", end = "")
print()
Ln 4, Col 30 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)(e)(v)(i)(v)(e)(r)
nuvemaula@cloudshell:~$

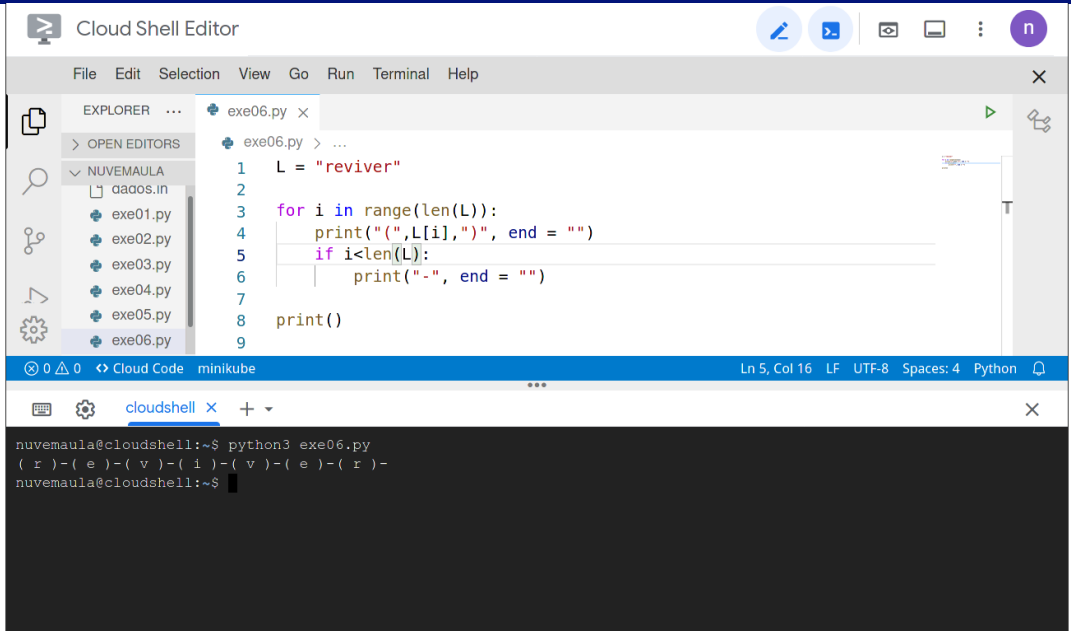

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
for c in L:
print("(",c,")", end = "-")
print()
Cloud Code minikube
Ln 4, Col 30 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)-
nuvemaula@cloudshell:~$
Como podemos evitar o último signo?

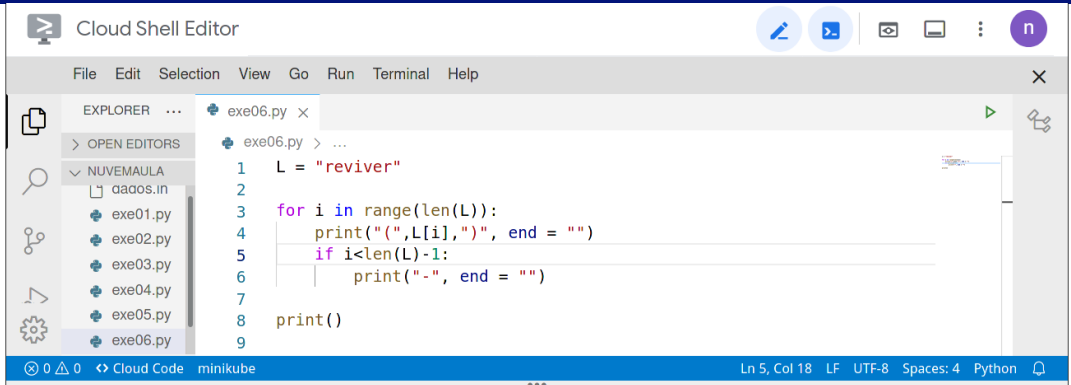

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
for c in L:
print("(",c,")", end = "")
print("-", end = "")
print()
Cloud Code
minikube
Ln 7, Col 3
LF
UTF-8
Spaces: 4
Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)-
nuvemaula@cloudshell:~$

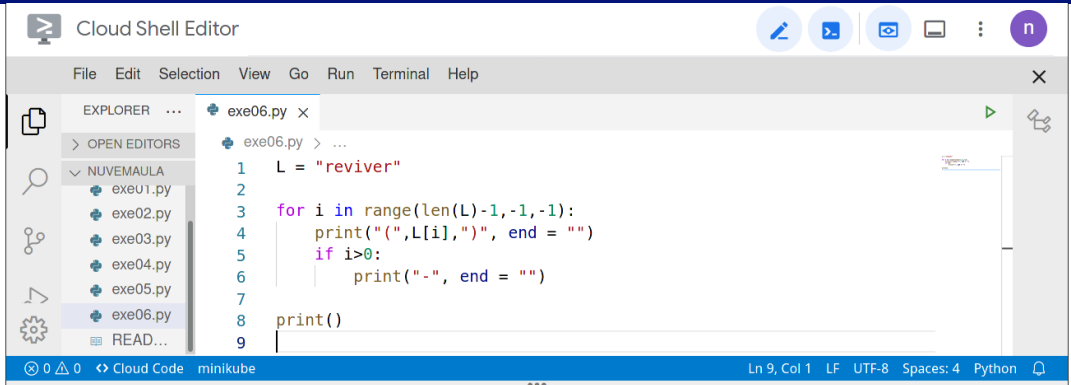

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
dados.in
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe06.py > ...
1 L = "reviver"
2
3 for c in L:
4 print("(",c,")", end = "")
5
6
7
8 print()
9
Ln 7, Col 10 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
i = 1
for c in L:
print("(",c,")", end = "")
if
print("-", end = "")
i += 1
print()
Ln 7, Col 10 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)
nuvemaula@cloudshell:~$

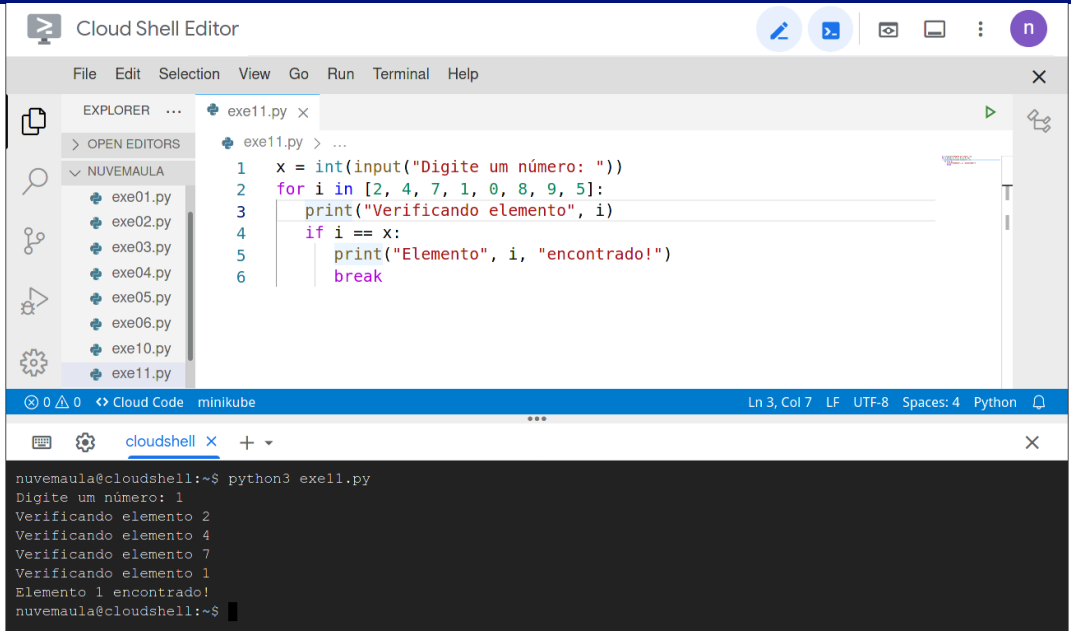

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
i = 1
for c in L:
print("(",c,")", end = "")
if i<len(L):
print("-", end = "")
i += 1
print()
Cloud Code
minikube
Ln 7, Col 10
LF
UTF-8
Spaces: 4
Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)
nuvemaula@cloudshell:~$
podemos deixar de usar i?

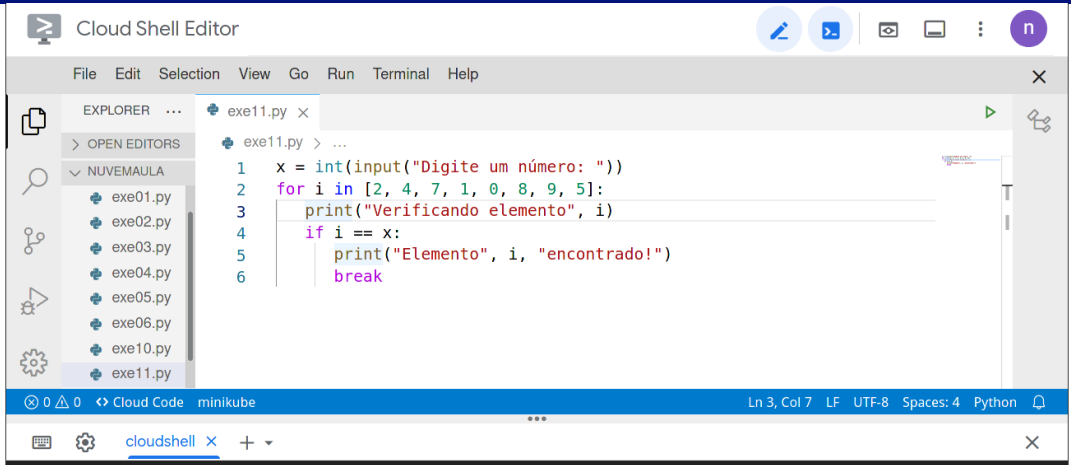

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
for i in range(len(L)):
print("(",L[i],")", end = "")
if i<len(L):
print("-", end = "")
print()
Cloud Code
minikube
Ln 5, Col 16
LF
UTF-8
Spaces: 4
Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)-
nuvemaula@cloudshell:~$

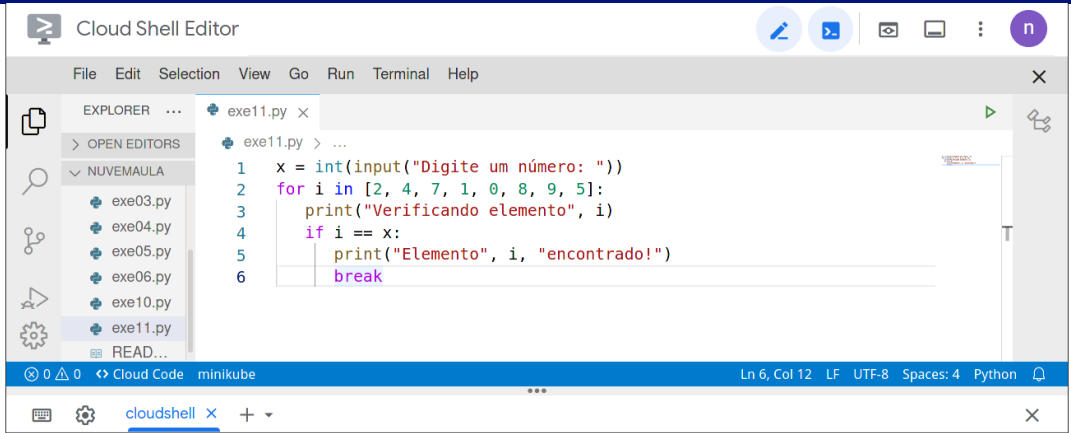

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
L = "reviver"
for i in range(len(L)):
print("(",L[i],")", end = "")
if i<len(L)-1:
print("-", end = "")
print()
Cloud Code
minikube
Ln 5, Col 18
LF
UTF-8
Spaces: 4
Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)
nuvemaula@cloudshell:~$

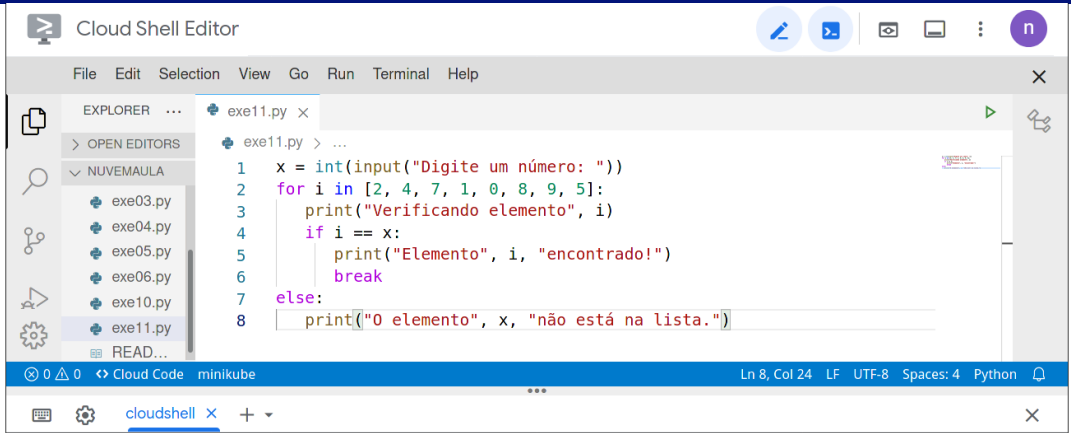

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe06.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
READ...
exe06.py > ...
1 L = "reviver"
2
3 for i in range(len(L)-1,-1,-1):
4 print("(",L[i],")", end = "")
5 if i>0:
6 print("-", end = "")
7
8 print()
9
0 0 Cloud Code minikube
Ln 9, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe06.py
(r)-(e)-(v)-(i)-(v)-(e)-(r)
nuvemaula@cloudshell:~$
O que aconteceu aqui?

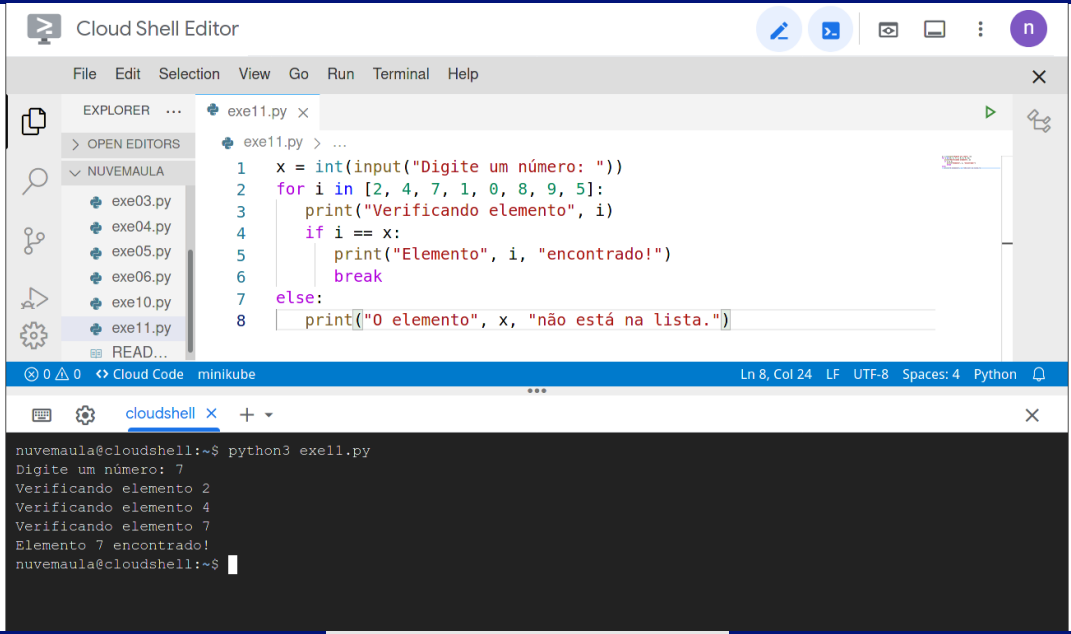
05 - Break e continue

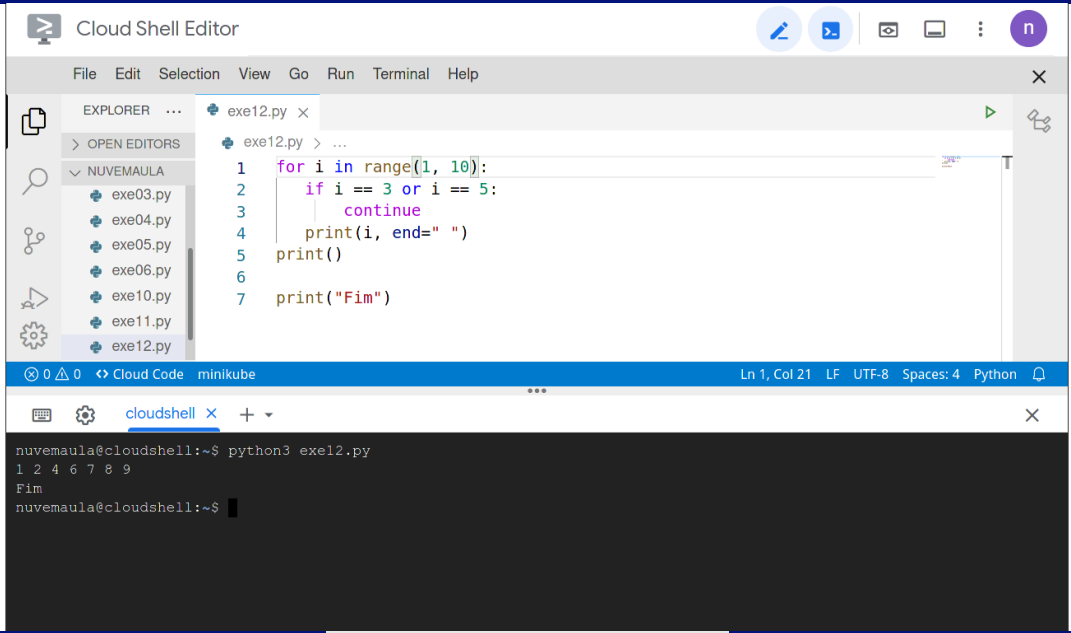

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe11.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
x = int(input("Digite um número: "))
for i in [2, 4, 7, 1, 0, 8, 9, 5]:
print("Verificando elemento", i)
if i == x:
print("Elemento", i, "encontrado!")
break
Cloud Code minikube
Ln 3, Col 7 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe11.py
Digite um número: 1
Verificando elemento 2
Verificando elemento 4
Verificando elemento 7
Verificando elemento 1
Elemento 1 encontrado!
nuvemaula@cloudshell:~$

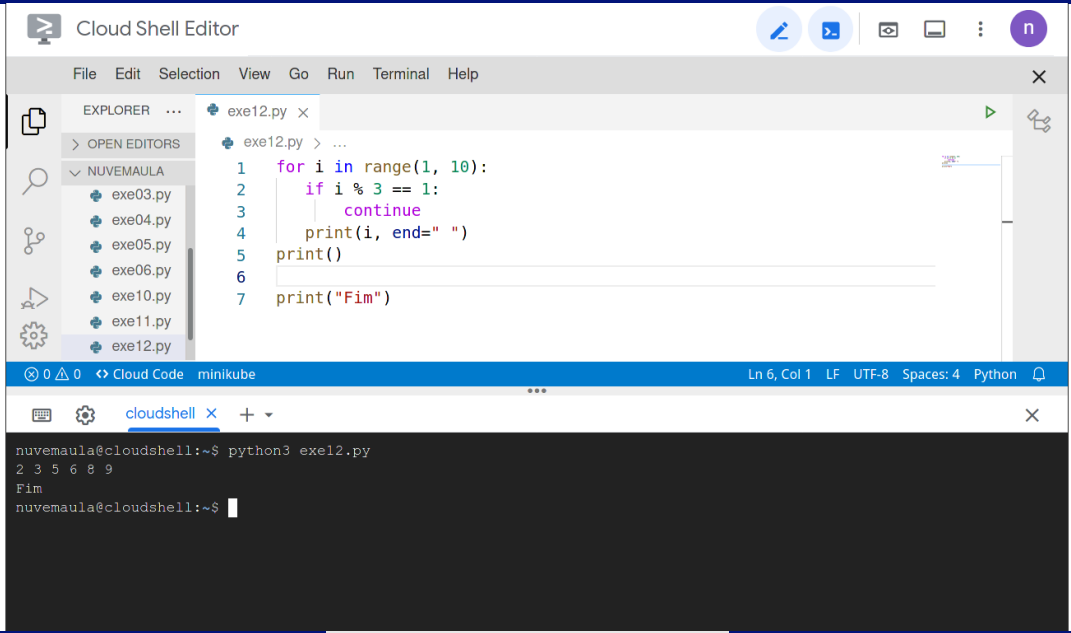

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe11.py
OPEN EDITORS
NUVEMAULA
exe01.py
exe02.py
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
x = int(input("Digite um número: "))
for i in [2, 4, 7, 1, 0, 8, 9, 5]:
print("Verificando elemento", i)
if i == x:
print("Elemento", i, "encontrado!")
break
Cloud Code minikube
Ln 3, Col 7 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe11.py
Digite um número: 4
Verificando elemento 2
Verificando elemento 4
Elemento 4 encontrado!
nuvemaula@cloudshell:~$

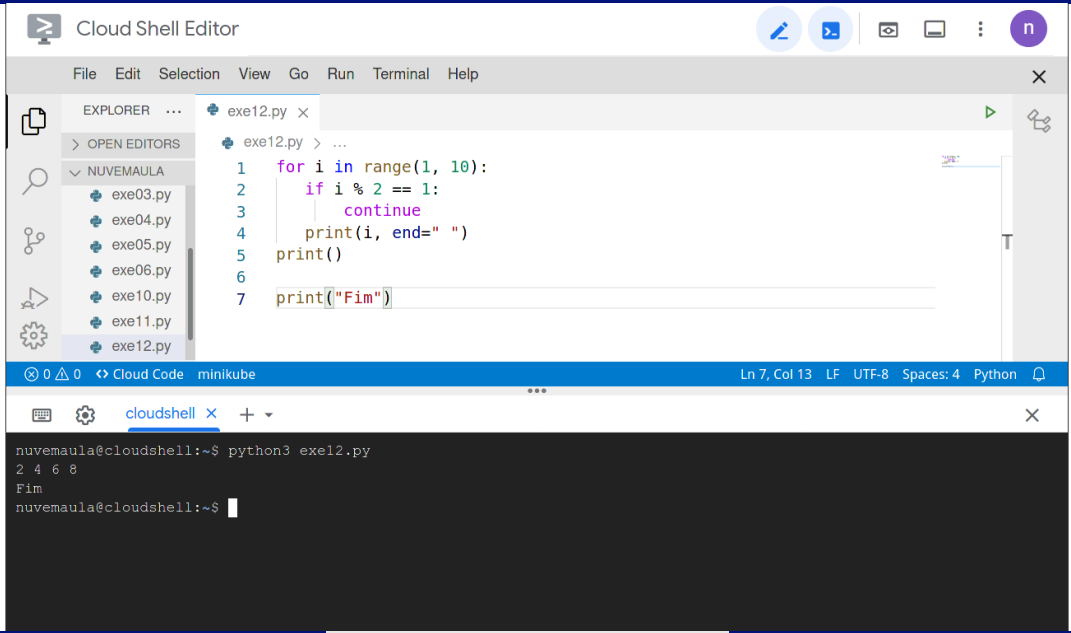

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe11.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
READ...
x = int(input("Digite um número: "))
for i in [2, 4, 7, 1, 0, 8, 9, 5]:
print("Verificando elemento", i)
if i == x:
print("Elemento", i, "encontrado!")
break
Cloud Code minikube
Ln 6, Col 12 LF UTF-8 Spaces: 4 Python
cloudshell
Verificando elemento 2
Verificando elemento 4
Verificando elemento 7
Verificando elemento 1
Verificando elemento 0
Verificando elemento 8
Verificando elemento 9
Verificando elemento 5
nuvemaula@cloudshell:~$

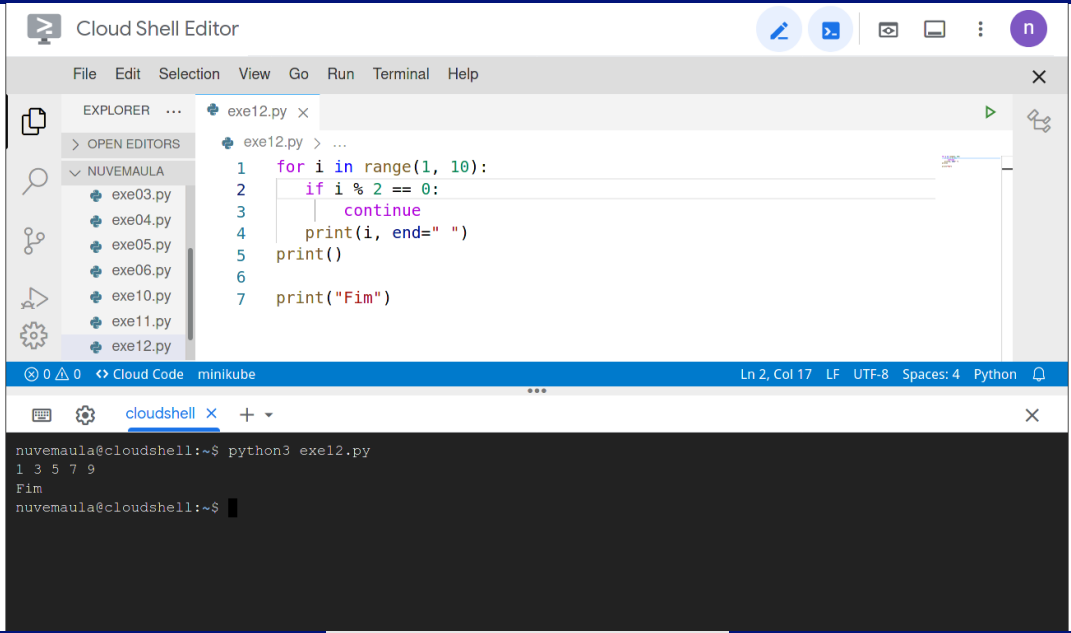

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe11.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
READ...
x = int(input("Digite um número: "))
for i in [2, 4, 7, 1, 0, 8, 9, 5]:
print("Verificando elemento", i)
if i == x:
print("Elemento", i, "encontrado!")
break
else:
print("O elemento", x, "não está na lista.")
Cloud Code minikube
Ln 8, Col 24 LF UTF-8 Spaces: 4 Python
cloudshell
Verificando elemento 4
Verificando elemento 7
Verificando elemento 1
Verificando elemento 0
Verificando elemento 8
Verificando elemento 9
Verificando elemento 5
O elemento 22 não está na lista.
nuvemaula@cloudshell:~$

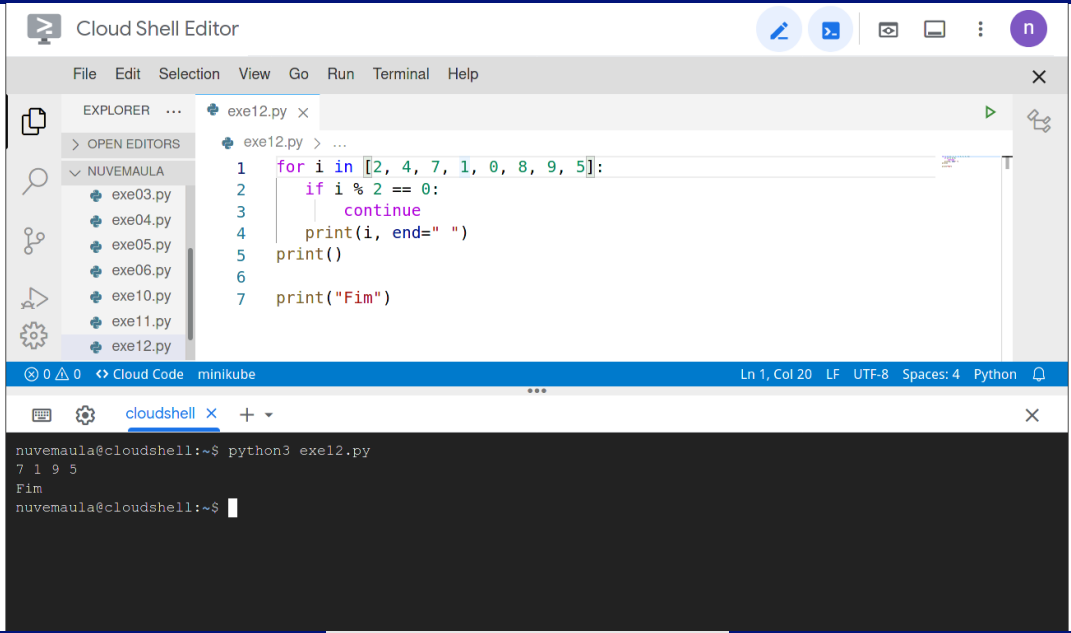

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe11.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
READ...
x = int(input("Digite um número: "))
for i in [2, 4, 7, 1, 0, 8, 9, 5]:
print("Verificando elemento", i)
if i == x:
print("Elemento", i, "encontrado!")
break
else:
print("O elemento", x, "não está na lista.")
Cloud Code minikube
Ln 8, Col 24 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell1:~$ python3 exe11.py
Digite um número: 7
Verificando elemento 2
Verificando elemento 4
Verificando elemento 7
Elemento 7 encontrado!
nuvemaula@cloudshell1:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe12.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe12.py > ...
1 for i in range(1, 10):
2 if i == 3 or i == 5:
3 continue
4 print(i, end=" ")
5 print()
6
7 print("Fim")
0 0 Cloud Code minikube
Ln 1, Col 21 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe12.py
1 2 4 6 7 8 9
Fim
nuvemaula@cloudshell:~$

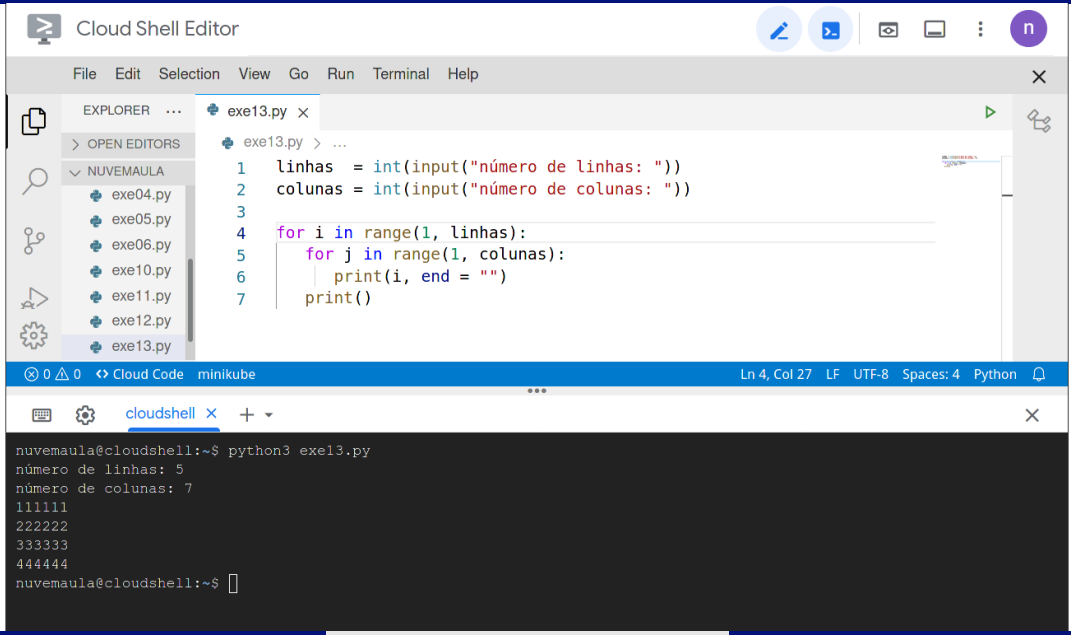

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe12.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe12.py > ...
1 for i in range(1, 10):
2 if i % 3 == 1:
3 continue
4 print(i, end=" ")
5 print()
6
7 print("Fim")
0 0 Cloud Code minikube
Ln 6, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe12.py
2 3 5 6 8 9
Fim
nuvemaula@cloudshell:~$

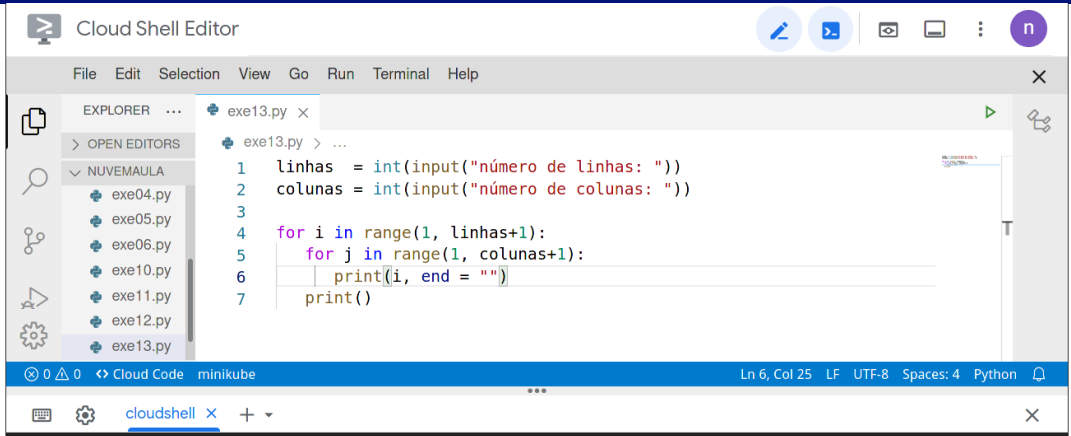

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe12.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe12.py > ...
1 for i in range(1, 10):
2 if i % 2 == 1:
3 continue
4 print(i, end=" ")
5 print()
6
7 print("Fim")
0 0 Cloud Code minikube
Ln 7, Col 13 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell1:~$ python3 exe12.py
2 4 6 8
Fim
nuvemaula@cloudshell1:~$

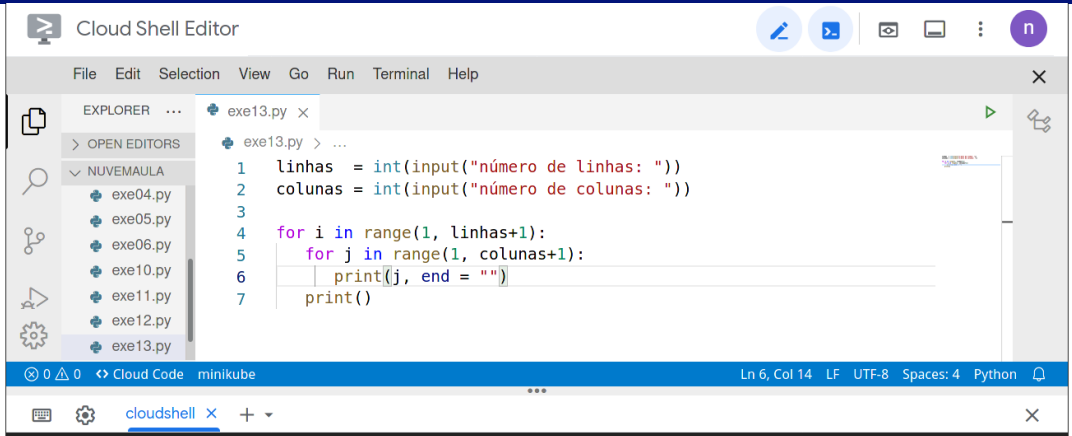

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe12.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe12.py > ...
1 for i in range(1, 10):
2 if i % 2 == 0:
3 continue
4 print(i, end=" ")
5 print()
6
7 print("Fim")
0 0 Cloud Code minikube
Ln 2, Col 17 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe12.py
1 3 5 7 9
Fim
nuvemaula@cloudshell:~$

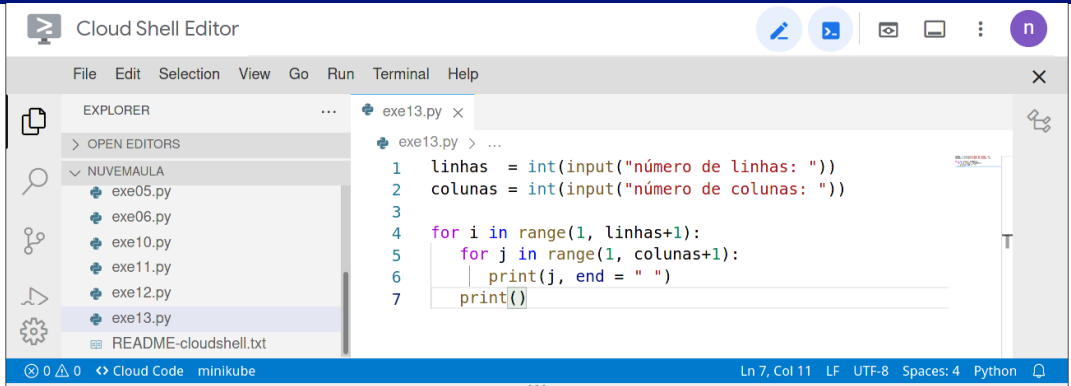

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe12.py
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
for i in [2, 4, 7, 1, 0, 8, 9, 5]:
if i % 2 == 0:
continue
print(i, end=" ")
print()
print("Fim")
Cloud Code minikube
Ln 1, Col 20 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe12.py
7 1 9 5
Fim
nuvemaula@cloudshell:~$

06 - Laços Aninhados

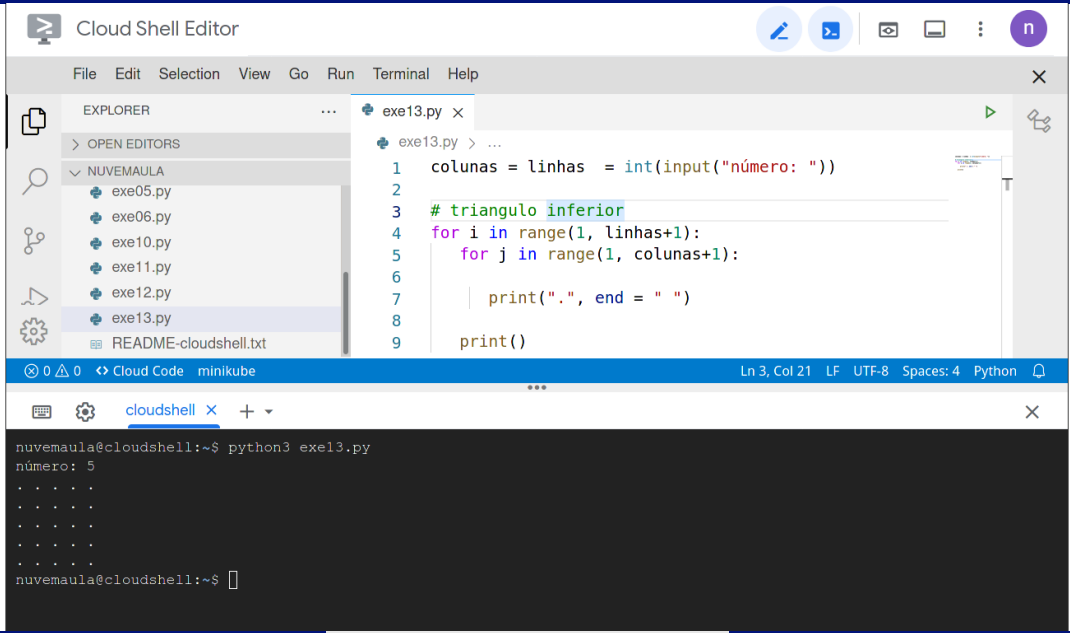

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe13.py
OPEN EDITORS
NUVEMAULA
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
linhas = int(input("número de linhas: "))
colunas = int(input("número de colunas: "))
for i in range(1, linhas):
for j in range(1, colunas):
print(i, end = "")
print()
Cloud Code minikube
Ln 4, Col 27 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número de linhas: 5
número de colunas: 7
111111
222222
333333
444444
nuvemaula@cloudshell:~$

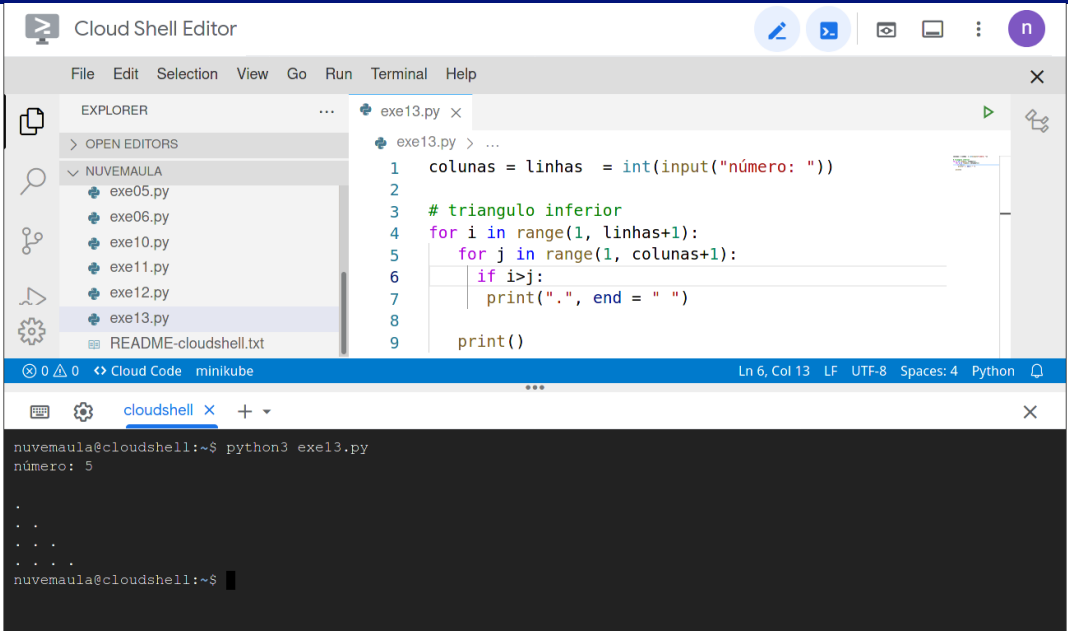

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe13.py
OPEN EDITORS
NUVEMAULA
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
linhas = int(input("número de linhas: "))
colunas = int(input("número de colunas: "))
for i in range(1, linhas+1):
for j in range(1, colunas+1):
print(i, end = "")
print()
Cloud Code minikube
Ln 6, Col 25 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell1:~$ python3 exe13.py
número de linhas: 5
número de colunas: 7
1111111
2222222
3333333
4444444
5555555
nuvemaula@cloudshell1:~$

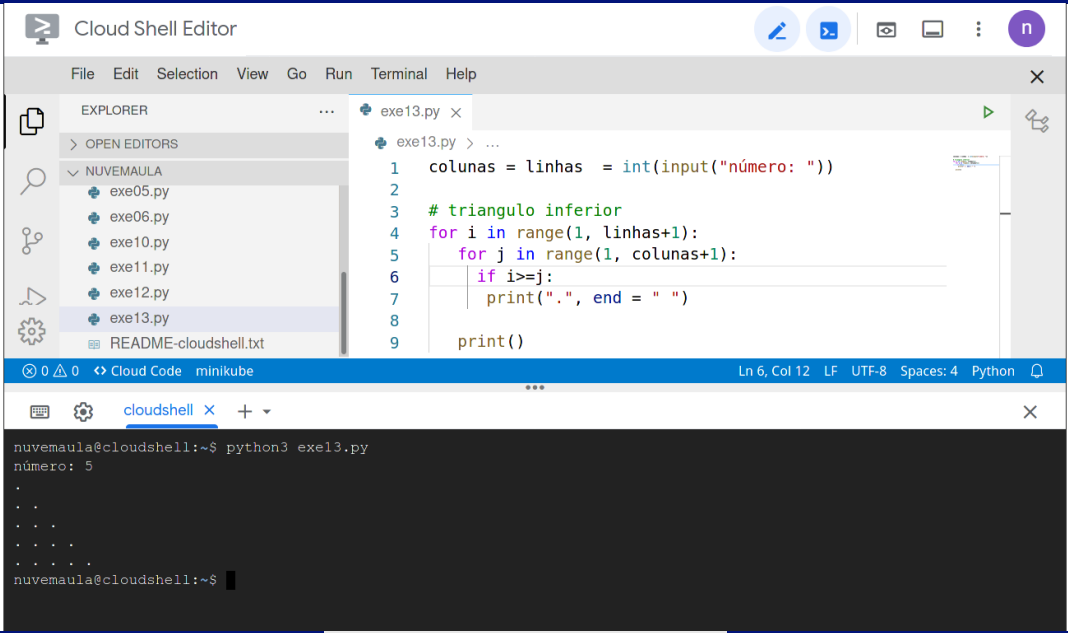

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
exe13.py
OPEN EDITORS
NUVEMAULA
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
linhas = int(input("número de linhas: "))
colunas = int(input("número de colunas: "))
for i in range(1, linhas+1):
for j in range(1, colunas+1):
print(j, end = "")
print()
Cloud Code minikube
Ln 6, Col 14 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número de linhas: 5
número de colunas: 7
1234567
1234567
1234567
1234567
1234567
nuvemaula@cloudshell:~$

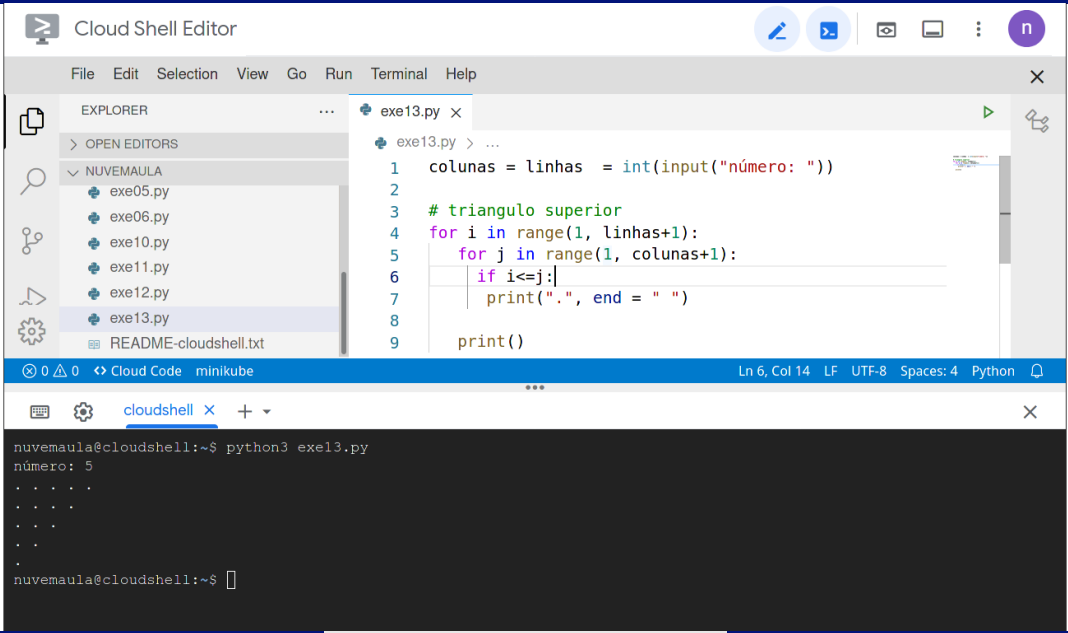

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 linhas = int(input("número de linhas: "))
2 colunas = int(input("número de colunas: "))
3
4 for i in range(1, linhas+1):
5 for j in range(1, colunas+1):
6 print(j, end = " ")
7 print()
0 0 Cloud Code minikube
Ln 7, Col 11 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número de linhas: 5
número de colunas: 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
1 2 3 4 5 6 7
nuvemaula@cloudshell:~$

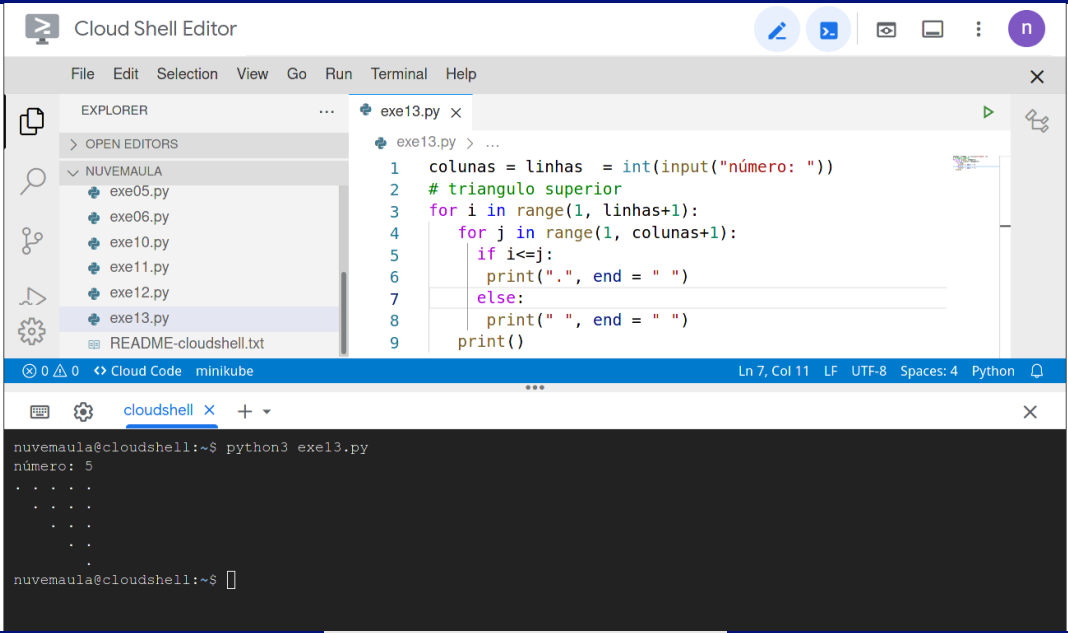

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 linhas = int(input("número de linhas: "))
2 colunas = int(input("número de colunas: "))
3
4 for i in range(1, linhas+1):
5 for j in range(1, colunas+1):
6 print(".", end = " ")
7 print()
0 0 Cloud Code minikube
Ln 6, Col 15 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número de linhas: 5
número de colunas: 7
. . . . . .
. . . . . .
. . . . . .
. . . . . .
. . . . . .
nuvemaula@cloudshell:~$

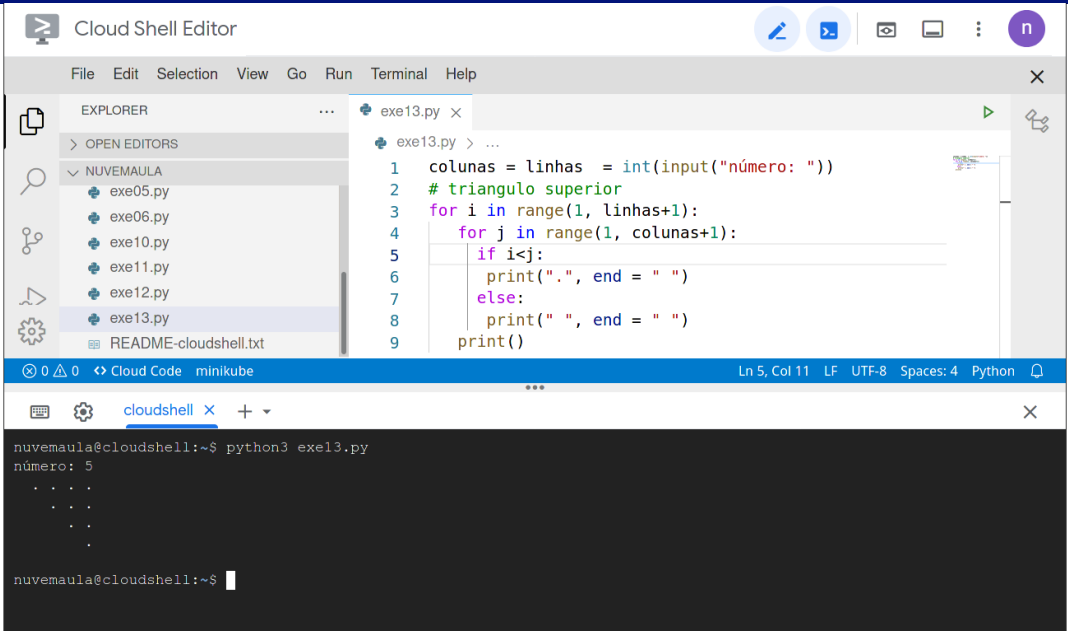

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 colunas = linhas = int(input("número: "))
2
3 # triangulo inferior
4 for i in range(1, linhas+1):
5 for j in range(1, colunas+1):
6
7 print(".", end = " ")
8
9 print()
0 0 Cloud Code minikube
Ln 3, Col 21 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 5
. . . . .
. . . . .
. . . . .
. . . . .
. . . . .
nuvemaula@cloudshell:~$

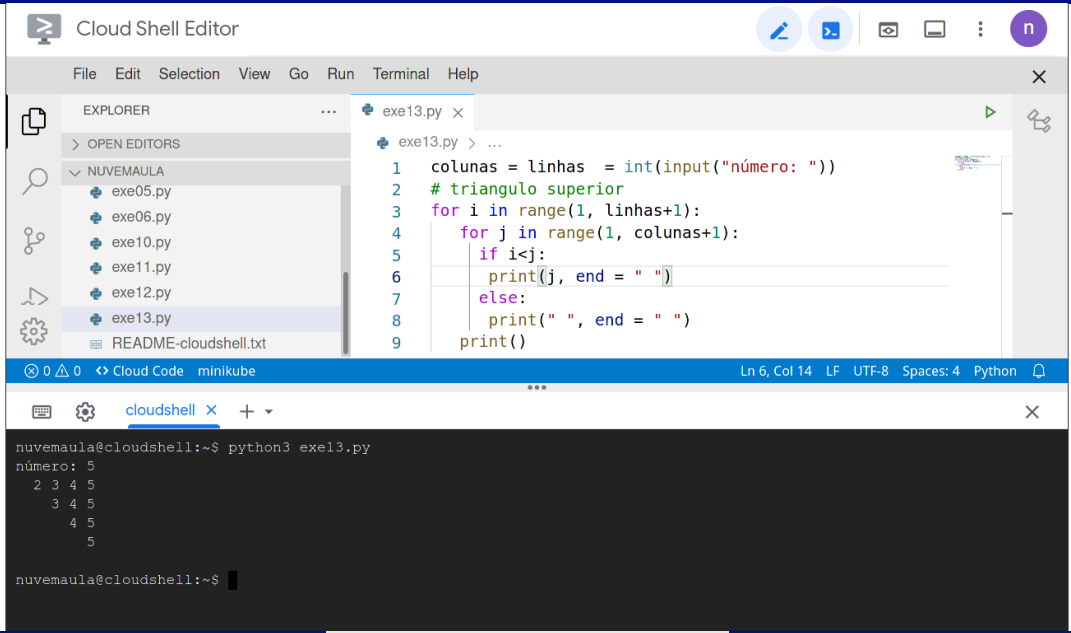

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 colunas = linhas = int(input("número: "))
2
3 # triangulo inferior
4 for i in range(1, linhas+1):
5 for j in range(1, colunas+1):
6 if i>j:
7 print(".", end = " ")
8
9 print()
0 0 Cloud Code minikube
Ln 6, Col 13 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 5
.
. .
. . .
. . . .
nuvemaula@cloudshell:~$

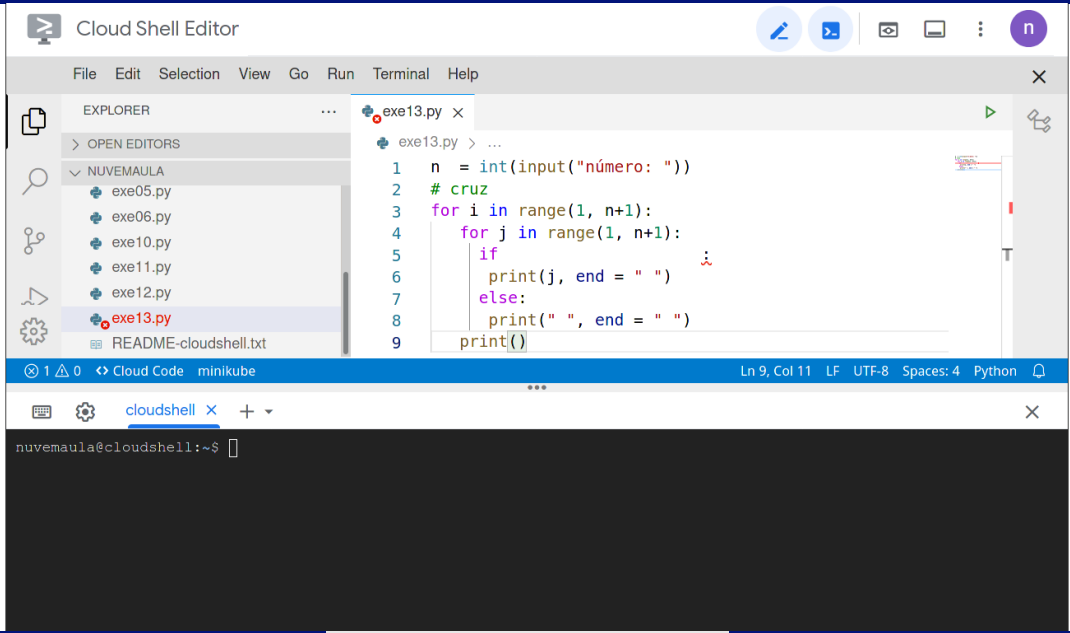

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 colunas = linhas = int(input("número: "))
2
3 # triangulo inferior
4 for i in range(1, linhas+1):
5 for j in range(1, colunas+1):
6 if i>=j:
7 print(".", end = " ")
8
9 print()
0 0 Cloud Code minikube
Ln 6, Col 12 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 5
.
. .
. . .
. . . .
. . . . .
nuvemaula@cloudshell:~$

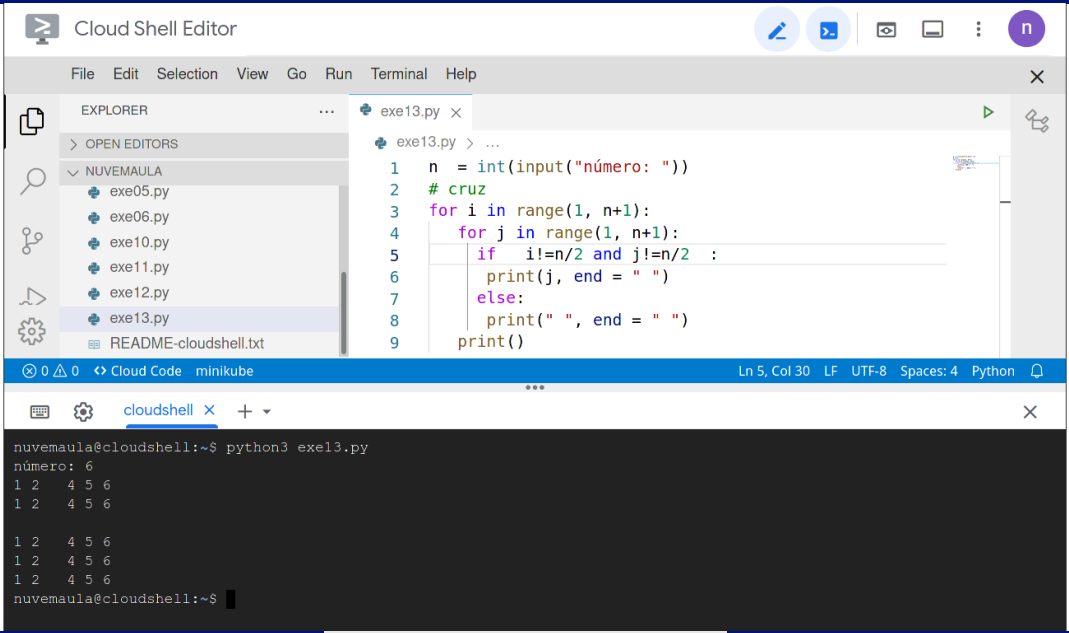

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 colunas = linhas = int(input("número: "))
2
3 # triangulo superior
4 for i in range(1, linhas+1):
5 for j in range(1, colunas+1):
6 if i<=j:
7 print(".", end = " ")
8
9 print()
Ln 6, Col 14 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 5
. . . . .
. . . .
. . .
. .
.
nuvemaula@cloudshell:~$

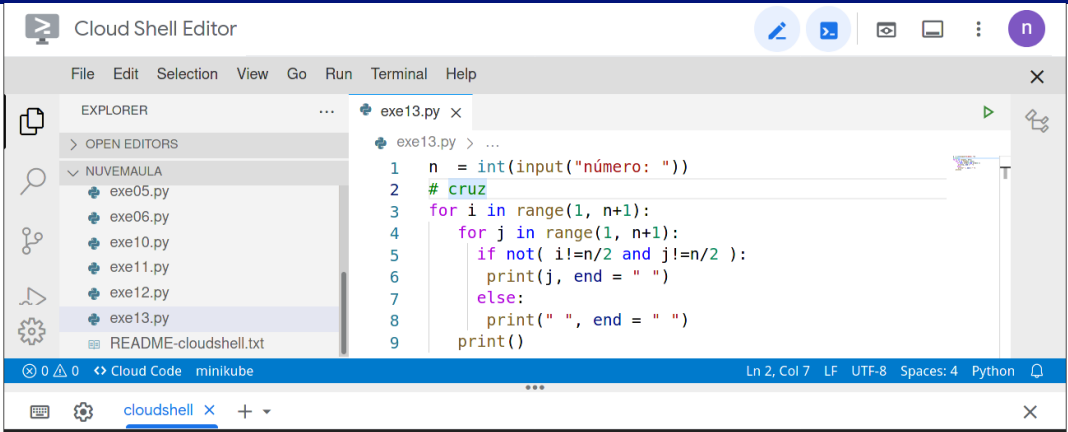

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 colunas = linhas = int(input("número: "))
2 # triangulo superior
3 for i in range(1, linhas+1):
4 for j in range(1, colunas+1):
5 if i<=j:
6 print(".", end = " ")
7 else:
8 print(" ", end = " ")
9 print()
0 0 Cloud Code minikube
Ln 7, Col 11 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 5
. . . . .
. . . .
. . .
. .
.
nuvemaula@cloudshell:~$

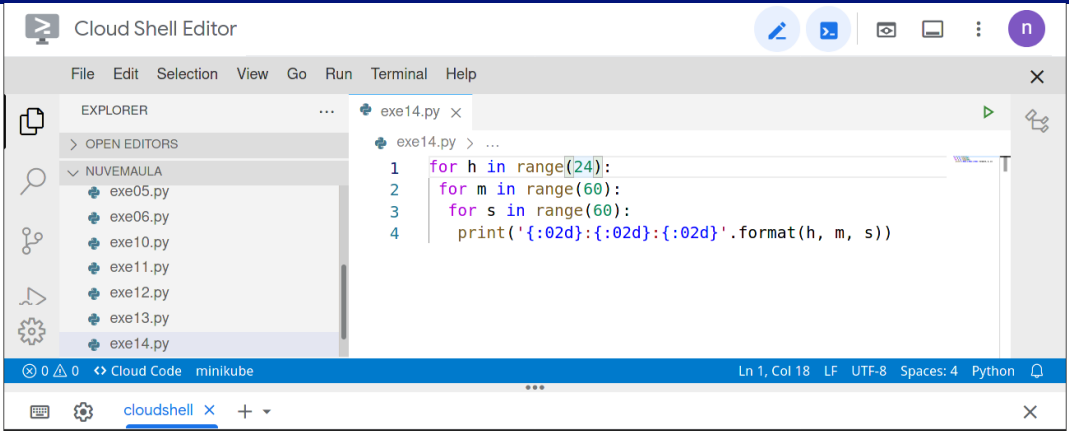

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 colunas = linhas = int(input("número: "))
2 # triangulo superior
3 for i in range(1, linhas+1):
4 for j in range(1, colunas+1):
5 if i<j:
6 print(".", end = " ")
7 else:
8 print(" ", end = " ")
9 print()
0 0 Cloud Code minikube
Ln 5, Col 11 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 5
. . . .
. . .
. .
.
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 colunas = linhas = int(input("número: "))
2 # triangulo superior
3 for i in range(1, linhas+1):
4 for j in range(1, colunas+1):
5 if i<j:
6 print(j, end = " ")
7 else:
8 print(" ", end = " ")
9 print()
0 0 Cloud Code minikube
Ln 6, Col 14 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 5
2 3 4 5
3 4 5
4 5
5
nuvemaula@cloudshell:~$

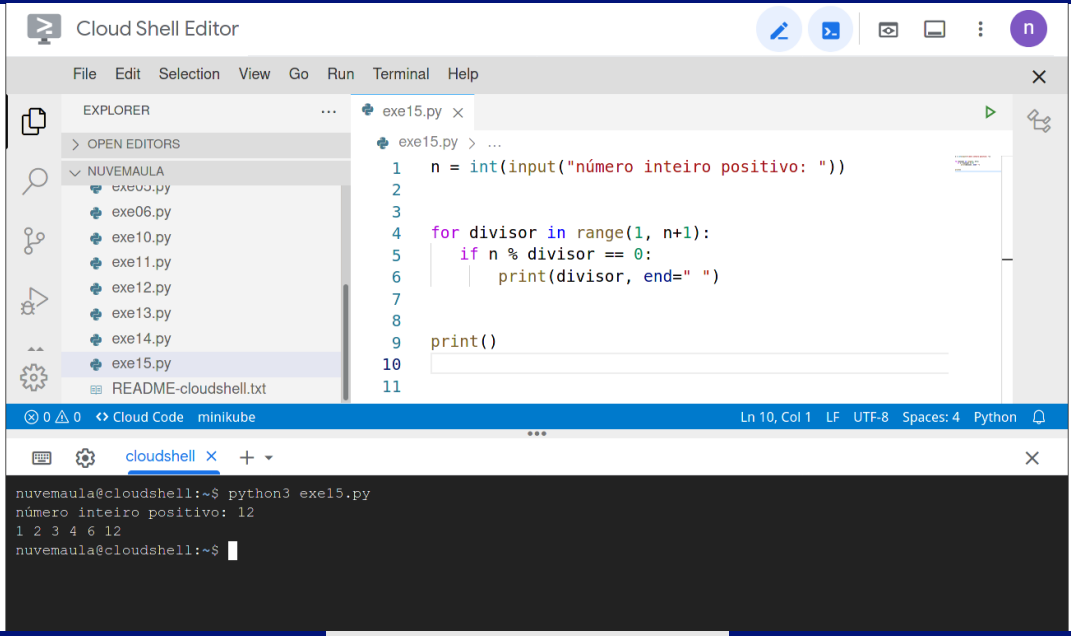

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 n = int(input("número: "))
2 # cruz
3 for i in range(1, n+1):
4 for j in range(1, n+1):
5 if
6 print(j, end = " ")
7 else:
8 print(" ", end = " ")
9 print()
Ln 9, Col 11 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$

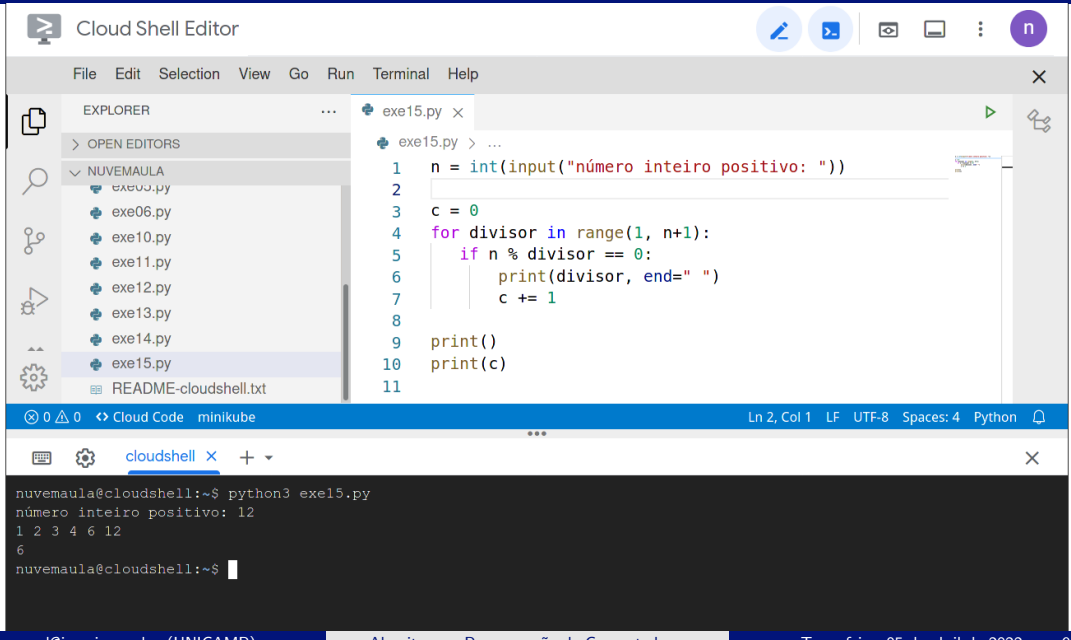

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 n = int(input("número: "))
2 # cruz
3 for i in range(1, n+1):
4 for j in range(1, n+1):
5 if i!=n/2 and j!=n/2 :
6 print(j, end = " ")
7 else:
8 print(" ", end = " ")
9 print()
0 0 Cloud Code minikube
Ln 5, Col 30 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 6
1 2 4 5 6
1 2 4 5 6
1 2 4 5 6
1 2 4 5 6
1 2 4 5 6
nuvemaula@cloudshell:~$

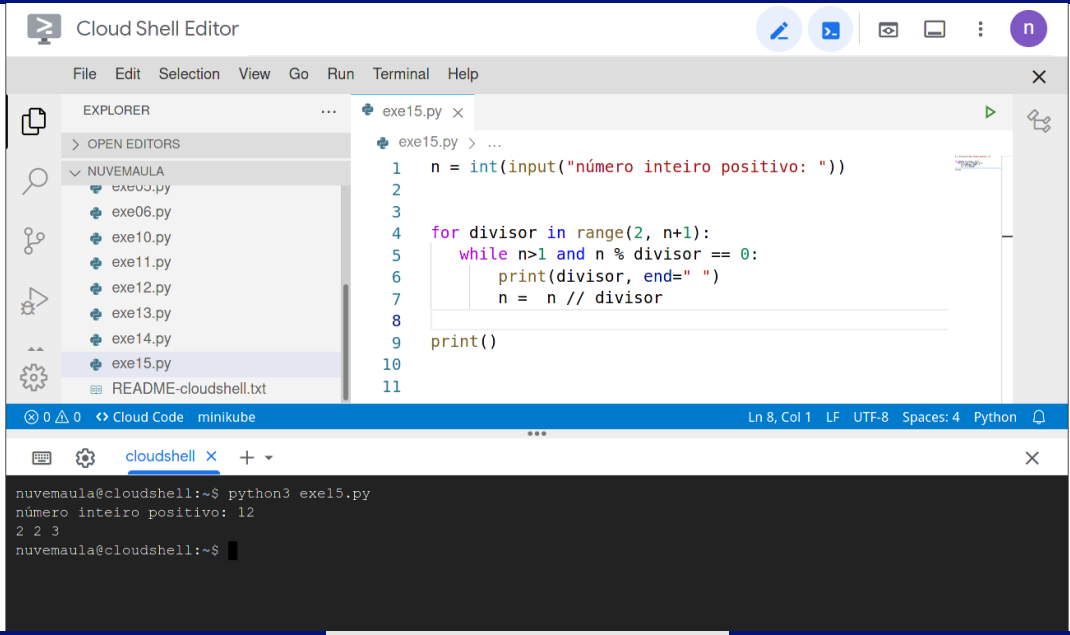

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
README-cloudshell.txt
exe13.py
exe13.py > ...
1 n = int(input("número: "))
2 # cruz
3 for i in range(1, n+1):
4 for j in range(1, n+1):
5 if not(i!=n/2 and j!=n/2):
6 print(j, end = " ")
7 else:
8 print(" ", end = " ")
9 print()
0 0 Cloud Code minikube
Ln 2, Col 7 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe13.py
número: 6
3
3
1 2 3 4 5 6
3
3
3
nuvemaula@cloudshell:~$

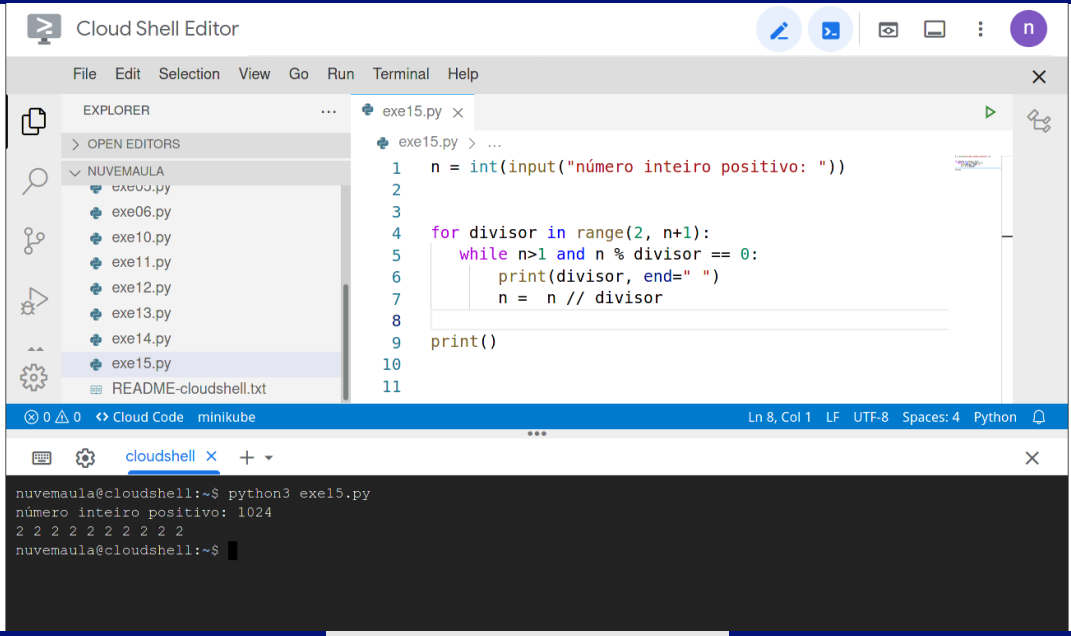

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe14.py
exe14.py > ...
1 for h in range(24):
2 for m in range(60):
3 for s in range(60):
4 print('{:02d}:{:02d}:{:02d}'.format(h, m, s))
0 0 Cloud Code minikube
Ln 1, Col 18 LF UTF-8 Spaces: 4 Python
cloudshell
23:59:52
23:59:53
23:59:54
23:59:55
23:59:56
23:59:57
23:59:58
23:59:59
nuvemaula@cloudshell:~$

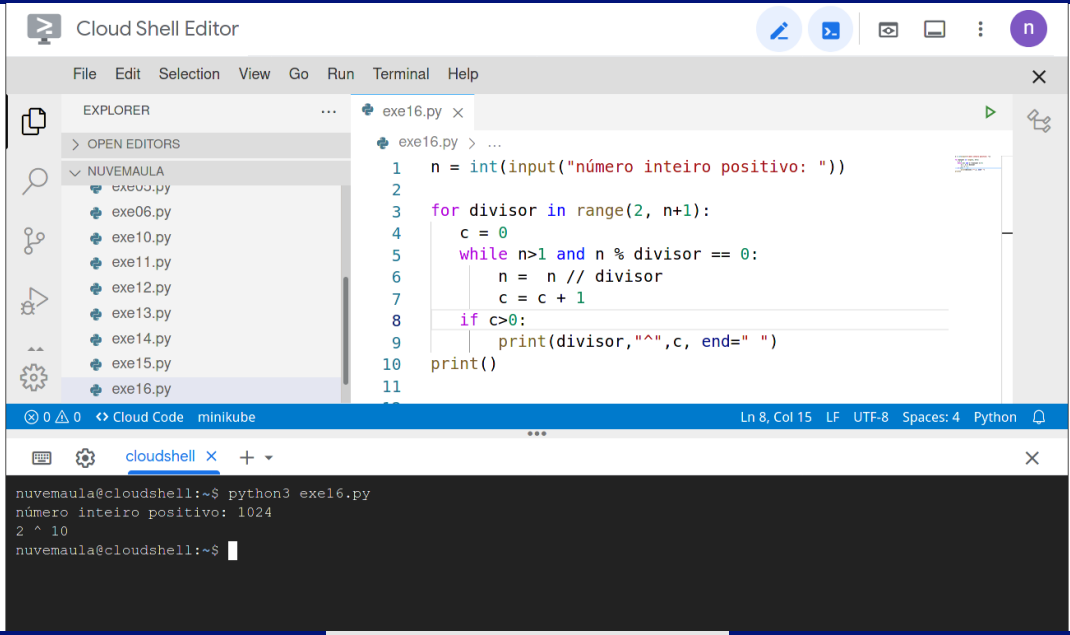
07 - Divisores de um Número

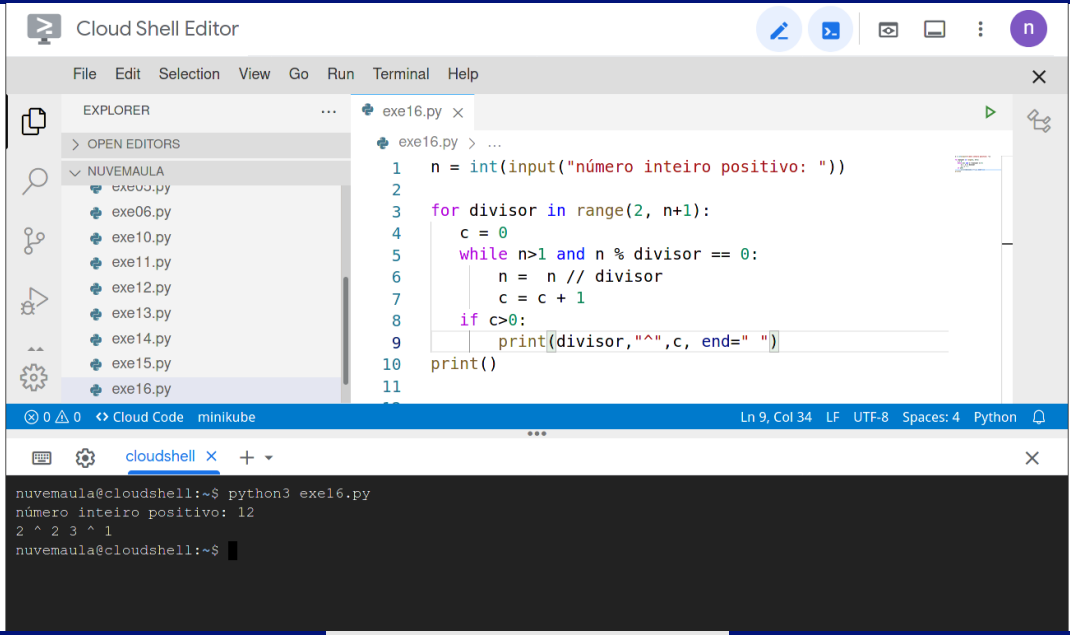

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
README-cloudshell.txt
exe15.py
exe15.py > ...
1 n = int(input("número inteiro positivo: "))
2
3
4 for divisor in range(1, n+1):
5 if n % divisor == 0:
6 print(divisor, end=" ")
7
8
9 print()
10
11
Cloud Code minikube
Ln 10, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe15.py
número inteiro positivo: 12
1 2 3 4 6 12
nuvemaula@cloudshell:~$

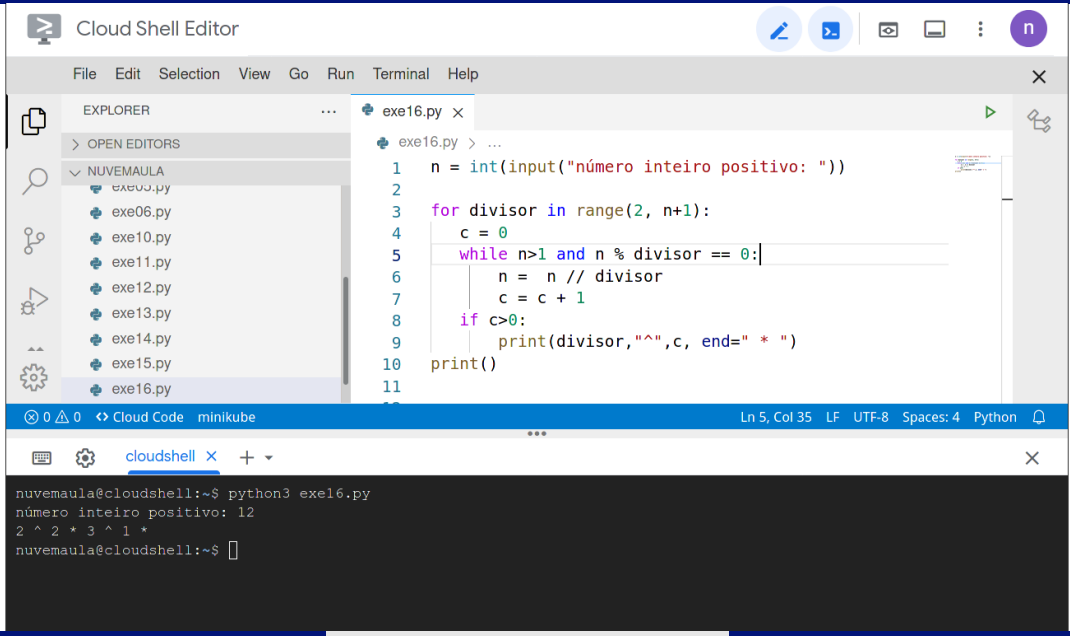

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
README-cloudshell.txt
exe15.py
exe15.py > ...
1 n = int(input("número inteiro positivo: "))
2
3 c = 0
4 for divisor in range(1, n+1):
5 if n % divisor == 0:
6 print(divisor, end=" ")
7 c += 1
8
9 print()
10 print(c)
11
Cloud Code minikube
Ln 2, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe15.py
número inteiro positivo: 12
1 2 3 4 6 12
6
nuvemaula@cloudshell:~$

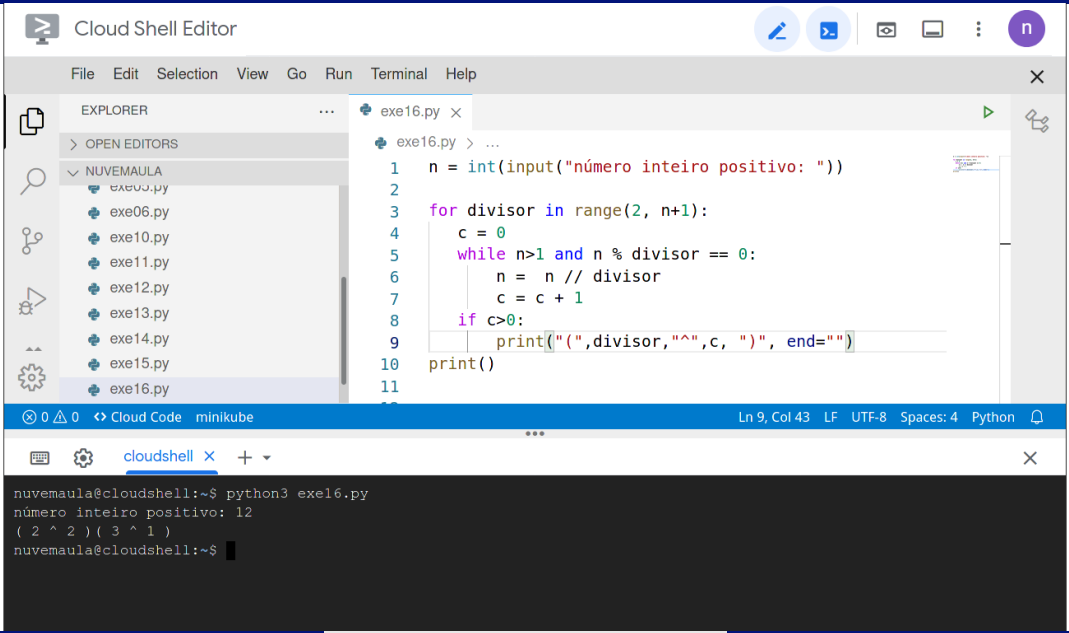

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
README-cloudshell.txt
exe15.py
exe15.py > ...
1 n = int(input("número inteiro positivo: "))
2
3
4 for divisor in range(2, n+1):
5 while n>1 and n % divisor == 0:
6 print(divisor, end=" ")
7 n = n // divisor
8
9 print()
10
11
Ln 8, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe15.py
número inteiro positivo: 12
2 2 3
nuvemaula@cloudshell:~$

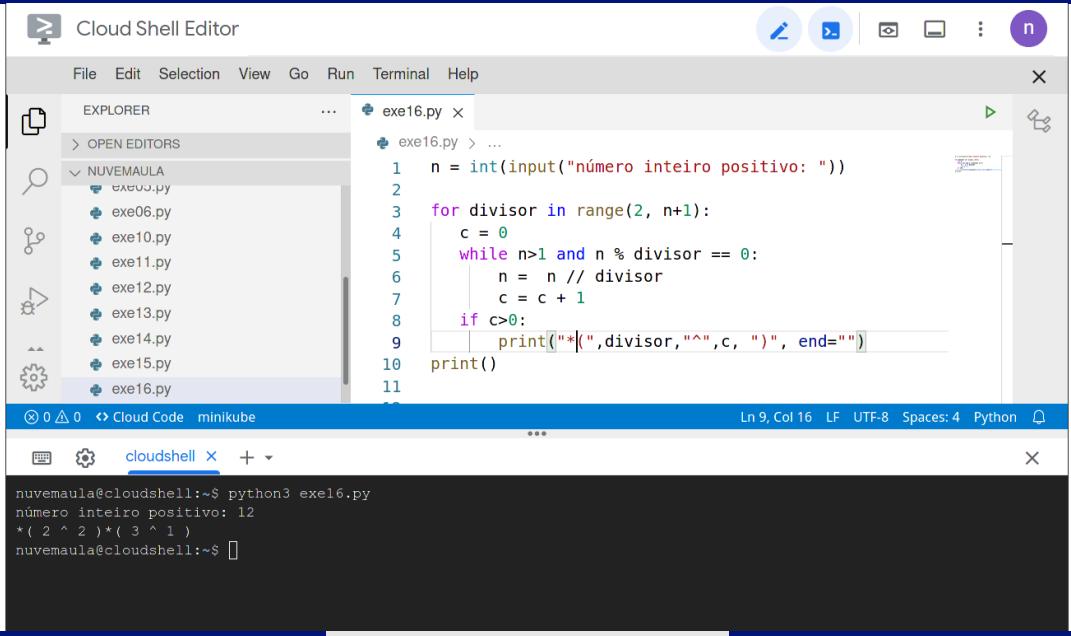

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
README-cloudshell.txt
exe15.py
exe15.py > ...
1 n = int(input("número inteiro positivo: "))
2
3
4 for divisor in range(2, n+1):
5 while n>1 and n % divisor == 0:
6 print(divisor, end=" ")
7 n = n // divisor
8
9 print()
10
11
Ln 8, Col 1 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe15.py
número inteiro positivo: 1024
2 2 2 2 2 2 2 2 2 2
nuvemaula@cloudshell:~$

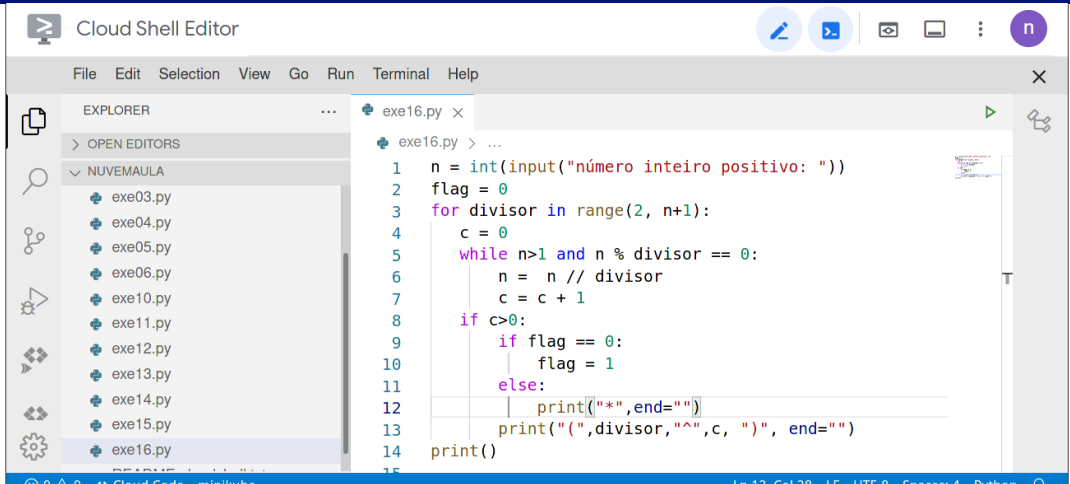

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
exe16.py
exe16.py
exe16.py > ...
1 n = int(input("número inteiro positivo: "))
2
3 for divisor in range(2, n+1):
4 c = 0
5 while n>1 and n % divisor == 0:
6 n = n // divisor
7 c = c + 1
8 if c>0:
9 print(divisor,"^",c, end=" ")
10 print()
11
Cloud Code minikube
Ln 8, Col 15 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe16.py
número inteiro positivo: 1024
2 ^ 10
nuvemaula@cloudshell:~$

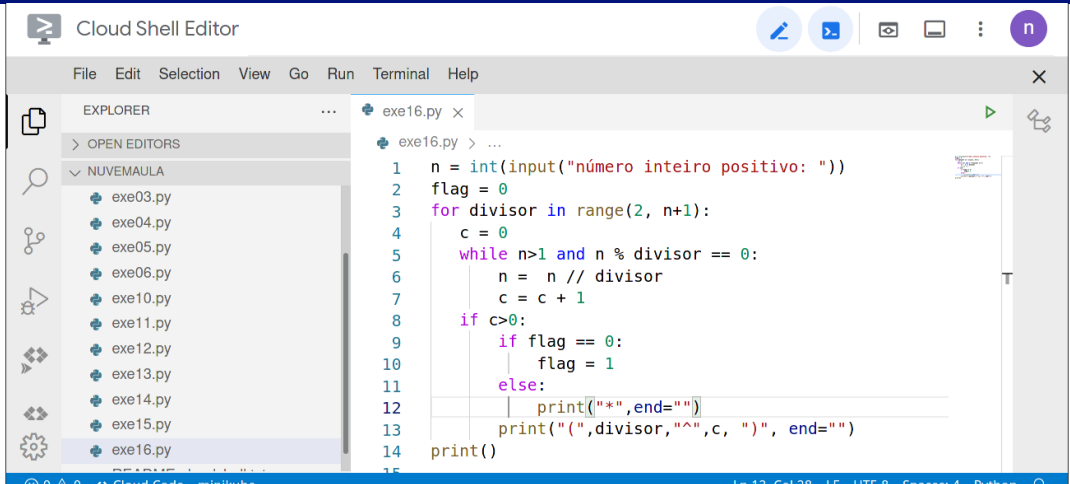

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
exe16.py
exe16.py
exe16.py > ...
1 n = int(input("número inteiro positivo: "))
2
3 for divisor in range(2, n+1):
4 c = 0
5 while n>1 and n % divisor == 0:
6 n = n // divisor
7 c = c + 1
8 if c>0:
9 print(divisor,"^",c, end=" ")
10 print()
11
Cloud Code minikube
Ln 9, Col 34 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe16.py
número inteiro positivo: 12
2 ^ 2 3 ^ 1
nuvemaula@cloudshell:~$

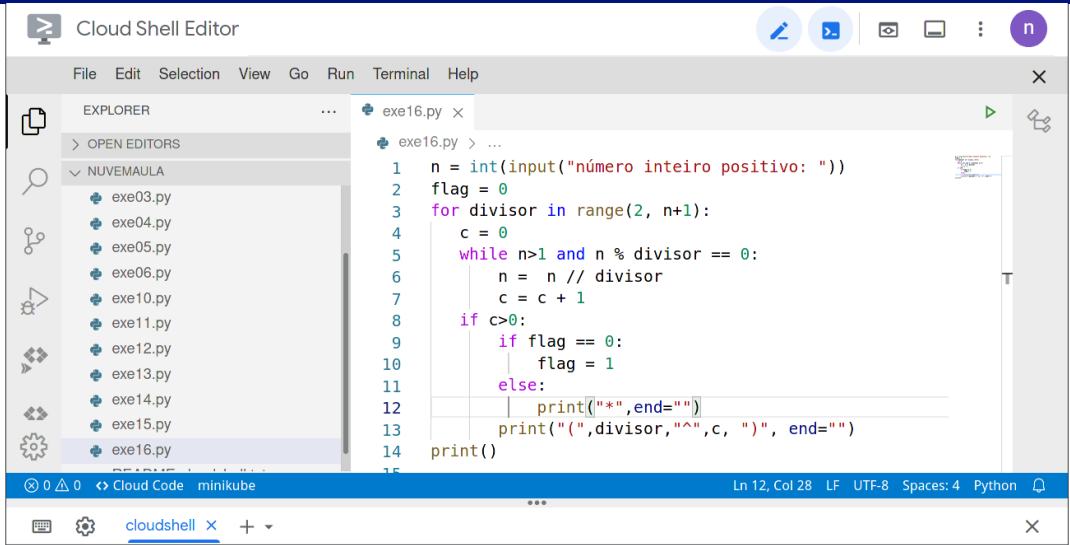

Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
exe16.py
exe16.py
exe16.py > ...
1 n = int(input("número inteiro positivo: "))
2
3 for divisor in range(2, n+1):
4 c = 0
5 while n>1 and n % divisor == 0:
6 n = n // divisor
7 c = c + 1
8 if c>0:
9 print(divisor,"^",c, end=" * ")
10 print()
11
Cloud Code minikube
Ln 5, Col 35 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe16.py
número inteiro positivo: 12
2 ^ 2 * 3 ^ 1 *
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
exe16.py
exe16.py
exe16.py > ...
1 n = int(input("número inteiro positivo: "))
2
3 for divisor in range(2, n+1):
4 c = 0
5 while n>1 and n % divisor == 0:
6 n = n // divisor
7 c = c + 1
8 if c>0:
9 print("(",divisor,"^",c, ")", end="")
10 print()
11
Cloud Code minikube
Ln 9, Col 43 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe16.py
número inteiro positivo: 12
(2 ^ 2)(3 ^ 1)
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
exe16.py
exe16.py
n = int(input("número inteiro positivo: "))
for divisor in range(2, n+1):
c = 0
while n>1 and n % divisor == 0:
n = n // divisor
c = c + 1
if c>0:
print("*(",divisor,"^",c, ")", end="")
print()
Cloud Code minikube
Ln 9, Col 16 LF UTF-8 Spaces: 4 Python
cloudshell
nuvemaula@cloudshell:~$ python3 exe16.py
número inteiro positivo: 12
(2 ^ 2)(3 ^ 1)
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
exe16.py
exe16.py
1 n = int(input("número inteiro positivo: "))
2 flag = 0
3 for divisor in range(2, n+1):
4 c = 0
5 while n>1 and n % divisor == 0:
6 n = n // divisor
7 c = c + 1
8 if c>0:
9 if flag == 0:
10 flag = 1
11 else:
12 print("*",end="")
13 print("(",divisor,"^",c, ")", end="")
14 print()
0 0 Cloud Code minikube
Ln 12, Col 28 LF UTF-8 Spaces: 4 Python
cloudshell
número inteiro positivo: 12
(2 ^ 2)*(3 ^ 1)
nuvemaula@cloudshell:~$


Cloud Shell Editor
File Edit Selection View Go Run Terminal Help
EXPLORER
OPEN EDITORS
NUVEMAULA
exe03.py
exe04.py
exe05.py
exe06.py
exe10.py
exe11.py
exe12.py
exe13.py
exe14.py
exe15.py
exe16.py
exe16.py
exe16.py > ...
1 n = int(input("número inteiro positivo: "))
2 flag = 0
3 for divisor in range(2, n+1):
4 c = 0
5 while n>1 and n % divisor == 0:
6 n = n // divisor
7 c = c + 1
8 if c>0:
9 if flag == 0:
10 flag = 1
11 else:
12 print("*",end="")
13 print("(",divisor,"^",c, ")", end="")
14 print()
0 0 Cloud Code minikube
Ln 12, Col 28 LF UTF-8 Spaces: 4 Python
cloudshell
número inteiro positivo: 1024
(2 ^ 10)
nuvemaula@cloudshell:~$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13 print("(",divisor,"^",c, ")", end="")
14 print()
0 0 Cloud Code minikube
Ln 12, Col 28 LF UTF-8 Spaces: 4 Python
cloudshell
número inteiro positivo: 3628800
(2 ^ 8)*(3 ^ 4)*(5 ^ 2)*(7 ^ 1)
nuvemaula@cloudshell:~$

Perguntas ....

Referências

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  Python Básico: Tipos, Variáveis, Operadores, Entrada e Saída [slides] [vídeo]
  Comandos Condicionais [slides] [vídeo]
  Comandos de Repetição [slides] [vídeo]
  Listas e Tuplas [slides] [vídeo]
  Strings [slides] [vídeo]
  Dicionários [slides] [vídeo]
  Funções [slides] [vídeo]
  Objetos Multidimensionais [slides] [vídeo]
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  Recursão [slides] [vídeo]
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- Socratica, Python Programming Tutorials http://bit.ly/SocraticaPython/
- Google - online editor for cloud-native applications (Python programming) https://shell.cloud.google.com/
- w3schools - Python Tutorial https://www.w3schools.com/python/
- Outros, citados nos Slides.