In [2]:
```
import numpy as np
```

In [4]:
```
z = np.array(["*","*","*","*","*"])
for r in np.nditer(z[:,::1]):

    print(r)
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
<ipython-input-4-684fbfe862be> in <module>
      1 z = np.array(["*","*","*","*","*"])
----> 2 for r in np.nditer(z[:,::1]):
      3
      4     print(r)

IndexError: too many indices for array: array is 1-dimensional, but 2 were inde
xed
```

In [6]:
```
a=np.array([["*","*","*","*"],["*","*","*","*"]])
b=a.reshape(2,2,2)
c=b.reshape(-1)
for x in np.nditer(a):
    print(x)
```

```
*
*
*
*
*
*
*
*
```

In [23]:
```
a=np.array(["*","*","*","*"])
print(np.nditer[a:,::0]):
```

```
  File "<ipython-input-23-4560daa6b1a4>", line 2
    print(np.nditer[a:,::0]):
                            ^
SyntaxError: invalid syntax
```

In [11]:
```
r = np.array(["*"])
print( r[:, ::0])
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
<ipython-input-11-3331ff899d53> in <module>
      1 r = np.array(["*"])
----> 2 print( r[:, ::0])

IndexError: too many indices for array: array is 1-dimensional, but 2 were inde
xed
```

In [17]:
```
a=np.array(["*","*","*","*"])
b=np.array(["*","*","*","*"])
c=np.concatenate([a,b])
print(c)
```

```
['*' '*' '*' '*' '*' '*' '*' '*']
```

In [20]:
```
a=np.array([["*","*","*","*"],["*","*","*","*"]])
b=a.reshape(2,2,2)
c=b.reshape(-1)
for x in a:
    print(x)
```

```
['*' '*' '*' '*']
['*' '*' '*' '*']
```

In [24]:
```

J=0
for j in range(5):
    print("* * * * *")
    j=j+1
```

```
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
```

In [25]:
```
J=0
for j in range(5):
    print("*")
    j=j+1
```

```
*
*
*
*
*
```

In [27]:
```
J=0
for j in range(1):
    print("* * * * *")
```

```
* * * * *
```

In [30]:
```
a=0

for a in range(1):
    print("*")
for a in range(1):
    print("* *")
for a in range(1):
    print("* * *")
for a in range(1):
    print("* * * *")
for a in range(1):
    print("* * * * *")
```

```
*
* *
* * *
* * * *
* * * * *
```

In [31]:
```
b=0
for b in range(1):
    print("* * * * *")
for b in range(1):
    print("* * * * ")
for b in range(1):
    print("* * * ")
for b in range(1):
    print("* * ")
for b in range(1):
    print("*")
```

```
* * * * *
* * * *
* * *
* *
*
```

In [33]:
```
for i in reversed(range(0,5)):
    for a in range(0,i+1):
        print("*",end="")
    print("")
```

```
*****
****
***
**
*
```

In [34]:
```
for i in range(0,5):
    for a in range(0,i+1):
        print("*",end="")
    print("")
```

```
*
**
***
****
*****
```

In [35]:
```
a=0
for a in range(7):
    print(a*"*")
```

```

*
**
***
****
*****
******
```

In [36]:
```
a=0
for a in reversed (range(7)):
    print(a*"*")
```

```
******
*****
****
***
**
*
```

In [41]:
```
a=np.array([1,2,3,4,5,6,7,8,9,10,11,12])
b=np.split(a, 2)
print(b[1])
```

```
[ 7  8  9 10 11 12]
```

In [42]:
```
a=np.array([1,2,3,4,5,6,7,8,9,10,11,12])
b=np.array_split(a, 5)
print(b)
```

```
[array([1, 2, 3]), array([4, 5, 6]), array([7, 8]), array([ 9, 10]), array([11,
12])]
```

In [45]:
```
a=np.array([2,3,4,5])
b=np.split(a,2)
print(b)
```

```
[array([2, 3]), array([4, 5])]
```

In [47]:
```
a=np.array([2,3,8,9])
b=np.array_split(a,3)
print(b)
```

```
[array([[2, 3]]), array([[4, 5]]), array([], shape=(0, 2), dtype=int32)]
```

In [55]:
```
a=np.array([[1,2,3,4],[5,6,7,8],[9,10,11,12]])
b=np.array_split(a,3, axis=1)
print(b)
```

```
[array([[ 1,  2],
       [ 5,  6],
       [ 9, 10]]), array([[ 3],
       [ 7],
       [11]]), array([[ 4],
       [ 8],
       [12]])]
```

In [53]:
```
a=np.array([[2,3,8,9],[1,2,3,4],[6,7,8,9]])
b=np.split(a,3)
print(b)
```

```
[array([[2, 3, 8, 9]]), array([[1, 2, 3, 4]]), array([[6, 7, 8, 9]])]
```

In [66]:
```
a=np.array([1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16])
b=a.reshape(4,4)
c=np.split(b,2)


print(b[2])
```

```
[ 9 10 11 12]
```

In [67]:
```
a=np.array([1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16])
b=a.reshape(4,4)
c=np.split(b,2)
print(c)
```

```
[array([[1, 2, 3, 4],
       [5, 6, 7, 8]]), array([[ 9, 10, 11, 12],
       [13, 14, 15, 16]])]
```

In [77]:
```
a=np.array([1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16])


x=np.array([2,3,4,5,1,3,5,7,2,9,0,7,5,8,5,9])
z=x.reshape(4,4)

i=np.stack([b,z] , axis=1)
print(i)
```

```
[[[ 1  2  3  4]
  [ 2  3  4  5]]

 [[ 5  6  7  8]
  [ 1  3  5  7]]

 [[ 9 10 11 12]
  [ 2  9  0  7]]

 [[13 14 15 16]
  [ 5  8  5  9]]]
```

In [76]:
```
a=np.array([1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16])
b=a.reshape(4,4)

x=np.array([2,3,4,5,1,3,5,7,2,9,0,7,5,8,5,9])
z=x.reshape(4,4)

i=np.stack([b,z])
print(i)
```

```
[[[ 1  2  3  4]
  [ 5  6  7  8]
  [ 9 10 11 12]
  [13 14 15 16]]

 [[ 2  3  4  5]
  [ 1  3  5  7]
  [ 2  9  0  7]
  [ 5  8  5  9]]]
```

In [97]:
```
a=np.array([1,2,3,4,5,6,7,8,9])
b=a.reshape(3,3)
print(b)
c=np.split(b,3)
print(c[0])
```

```
[[1 2 3]
 [4 5 6]
 [7 8 9]]
[[1 2 3]]
```

In [93]:
```
o=np.array_split(b,8,axis=1)
print(o[0])
print(o[1])
print(o[2])
```

```
[[1]
 [4]
 [7]]
[[2]
 [5]
 [8]]
[[3]
 [6]
 [9]]
```

In [ ]: