In [2]:

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#Name: Brendan Lucas
#Roll No: 8953
#Div: SE Comps B

import numpy as np
array = np.arange(27)


dim = int(input("Enter No of dimensions of array,\n1 for 1D,\n2 for 2D,\n3 for 3D\n"))

if dim == 1:
    pass
elif dim==2:
    array = array.reshape(3,9)
elif dim==3:
    array = array.reshape(3,3,3)

print("Your Chosen Dimension is",dim)
print("State of the array is:")
print(array)

choice=int(input("Choose 1 for slicing and 2 for flipping"))
if choice==1:
    if dim ==1:
        start=int(input("Enter the starting index,default is 0: "))
        end = int(input("Enter the final index,default is -1: "))
        steps=int(input("Enter the steps to be taken,default is 1: "))
        print(array[start:end:steps])
    elif dim==2:
        start1=int(input("Enter the starting index,for dim 0,default is 0: "))
        end1= int(input("Enter the final index,for dim 0,default is -1: "))
        steps1=int(input("Enter the steps to be taken,for dim 0,default is 1: "))
        start2=int(input("Enter the starting index,for dim 1,default is 0: "))
        end2= int(input("Enter the final index,for dim 1,default is -1: "))
        steps2=int(input("Enter the steps to be taken,for dim 1,default is 1: "))
        print(array[start1:end1:steps1,start2:end2:steps2])
    elif dim==3:
        start=int(input("Enter the starting index,for dim 0,default is 0"))
        end = int(input("Enter the final index,for dim 0,default is -1"))
        steps=int(input("Enter the steps to be taken,for dim 0,default is 1"))
        start1=int(input("Enter the starting index,for dim 1,default is 0"))
        end1= int(input("Enter the final index,for dim 1,default is -1"))
        steps1=int(input("Enter the steps to be taken,for dim 1,default is 1"))
        start2=int(input("Enter the starting index,for dim 2,default is 0"))
        end2= int(input("Enter the final index,for dim 2,default is -1"))
        steps2=int(input("Enter the steps to be taken,for dim 2,default is 1"))
        print(array[start:end:steps,start1:end1:steps1,start2:end2steps2])
elif choice==2:
    axis=int(input("Choose the axis for flipping "))
    print("After Flipping")
    print(np.flip(array, axis))
```

```
Enter No of dimensions of array,
1 for 1D,
2 for 2D,
3 for 3D
3
Your Chosen Dimension is 3
```

```
State of the array is:
[[[ 0  1  2]
  [ 3  4  5]
  [ 6  7  8]]

 [[ 9 10 11]
  [12 13 14]
  [15 16 17]]

 [[18 19 20]
  [21 22 23]
  [24 25 26]]]
Choose 1 for slicing and 2 for flipping2
Choose the axis for flipping 0
After Flipping
[[[18 19 20]
  [21 22 23]
  [24 25 26]]

 [[ 9 10 11]
  [12 13 14]
  [15 16 17]]

 [[ 0  1  2]
  [ 3  4  5]
  [ 6  7  8]]]
```

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