

In [5]: `import numpy as np`

```
# 1. Creating a 3D array and slicing
arr_3d = np.array([[[1, 2, 3], [4, 5, 6]], [[7, 8, 9], [10, 11, 12]]])
sliced_3d = arr_3d[0, :, 1:] # Accessing the first 2D array, all rows, and columns
print("3D array: ", arr_3d)
print("Sliced 3D array:", sliced_3d)
```

```
3D array: [[[ 1  2  3]
 [ 4  5  6]]
```

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

```
Sliced 3D array: [[2 3]
 [5 6]]
```

In [6]: *# 2. Creating a 2D array and slicing from the end (negative index)*

```
arr_2d = np.array([[1, 2, 3], [4, 5, 6]])
sliced_end = arr_2d[:, -2:] # Accessing the last two columns of each row
print("2D array: ", arr_2d)
print("Sliced 2D array from end:", sliced_end)
```

```
2D array: [[1 2 3]
 [4 5 6]]
```

```
Sliced 2D array from end: [[2 3]
 [5 6]]
```

In [4]: *# 3. Creating a 2D array and making a copy*

```
arr_2d_copy = np.copy(arr_2d)
print("Original 2D array:", arr_2d)
print("Copy of 2D array:", arr_2d_copy)
```

```
Original 2D array: [[1 2 3]
 [4 5 6]]
```

```
Copy of 2D array: [[1 2 3]
 [4 5 6]]
```

In []: