

Day 8

DIY

Q1. Problem Statement: Understanding Array Manipulation - I

Define a NumPy array with 4*5 dimensions, and swap the array's dimensions to make it 5*4 using suitable functions.

Input Format:

You don't need to read any input in this problem.

Sample Output:

```
Original Array:  
[ 0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19]  
Reshaped Array:  
[[ 0  1  2  3]  
 [ 4  5  6  7]  
 [ 8  9 10 11]  
 [12 13 14 15]  
 [16 17 18 19]]  
Transpose of Array:  
[[ 0  1  2  3]  
 [ 4  5  6  7]  
 [ 8  9 10 11]  
 [12 13 14 15]  
 [16 17 18 19]]
```

Q2. Problem Statement: Understanding Array Manipulation - II

Write a Python program to create two 2-dimensional arrays and apply `hstack()`, `vstack()`, `concatenate()`, and `split()` functions to them to get the output as shown below.

Input Format:

You do not need to read any input in this problem.

Sample Output:

```
First array is:  
[[1 2]  
 [3 4]]  
Second array is:  
[[6 7]  
 [8 9]]  
Applying hstack() function:  
[[1 2 6 7]  
 [3 4 8 9]]  
Applying vstack() function:  
[[1 2]  
 [3 4]  
 [6 7]  
 [8 9]]  
Applying concatenate() function:  
[[1 2]  
 [3 4]  
 [6 7]  
 [8 9]]  
Applying split() function:  
[array([1, 2, 6, 7]), array([3, 4, 8, 9])]
```

