Transpose and Flatten ⭐

Problem   Submissions   Leaderboard   Editorial 🔒

Transpose

We can generate the transposition of an array using the tool `numpy.transpose`.

It will not affect the original array, but it will create a new array.

```
import numpy

my_array = numpy.array([[1,2,3],
                        [4,5,6]])
print numpy.transpose(my_array)

#Output
[[1 4]
 [2 5]
 [3 6]]
```

Flatten

The tool flatten creates a copy of the input array flattened to one dimension.

```
import numpy

my_array = numpy.array([[1,2,3],
                        [4,5,6]])
print my_array.flatten()

#Output
[1 2 3 4 5 6]
```

Task

You are given a NXM integer array matrix with space separated elements (N = rows and M = columns).

Your task is to print the transpose and flatten results.

Input Format

The first line contains the space separated values of N and M.

The next N lines contains the space separated elements of M columns.

Output Format

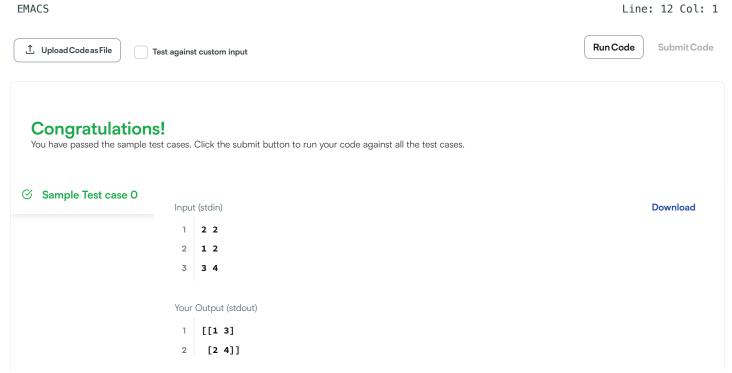First, print the transpose array and then print the flatten.

Sample Input

```
2 2
1 2
3 4
```

Sample Output

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

Change Theme   Language   Python 3

```python
1   import numpy
2
3   n, m = map(int, input().split())
4   arr = []
5   for _ in range(n):
6       arr.append(list(map(int, input().split())))
7
8   arr = numpy.array(arr)
9   print(numpy.transpose(arr))
10  print(arr.flatten())
11
12
```

EMACS   Line: 12 Col: 1

⬆ Upload Code as File   ☐ Test against custom input   Run Code   Submit Code

Congratulations!
You have passed the sample test cases. Click the submit button to run your code against all the test cases.

⊘ **Sample Test case 0**

Input (stdin)   Download

```
1   2 2
2   1 2
3   3 4
```

Your Output (stdout)

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

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

Expected Output   **Download**

```
1   [[1 3]
```