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Arrays | HackerRank

https://www.hackerrank.com/challenges/np-arrays/problem?isFullScreen=true

HackerRank | Prepare > Python > Numpy > Arrays

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A NumPy array is a grid of values. They are similar to lists, except that every element of an array must be the same type.

```
import numpy

a = numpy.array([1,2,3,4,5])
print a[1]      #2

b = numpy.array([1,2,3,4,5],float)
print b[1]      #2.0
```

In the above example, `numpy.array()` is used to convert a list into a NumPy array. The second argument (`float`) can be used to set the type of array elements.

Task

You are given a space separated list of numbers.

Your task is to print a reversed NumPy array with the element type `float`.

Input Format

A single line of input containing space separated numbers.

def arrays(arr):  
 # complete this function  
 # use numpy.array  
 return numpy.array(arr[::-1],float)  
  
> arr = input().strip().split(' ')...

Line: 5 Col: 1

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Arrays | HackerRank

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A NumPy array is a grid of values. They are similar to lists, except that every element of an array must be the same type.

```
import numpy

a = numpy.array([1,2,3,4,5])
print a[1]      #2

b = numpy.array([1,2,3,4,5],float)
print b[1]      #2.0
```

In the above example, `numpy.array()` is used to convert a list to a NumPy array. The second argument (`float`) can be used to set the data type of array elements.

**Task**

You are given a space separated list of numbers.

Your task is to print a reverse NumPy array with the element type `float`.

**Input Format**

A single line of input containing space separated numbers.

Python ★★★

Congrats!

You have earned your 3rd star.

Line: 5 Col: 1

Run Code

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00 points!

from the 4th star for your python

5%

115/220

Leaderboard

Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

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hacker rank - Search    Shape and Reshape | HackerRank    +

https://www.hackerrank.com/challenges/np-shape-reshape/problem?isFullScreen=true

A ⚡ ⚡ ... Chat

## HackerRank | Prepare > Python > Numpy > Shape and Reshape

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Problem

[3 4]  
[5 6]

Task

You are given a space separated list of nine integers. Your task is to convert this list into a 3X3 NumPy array.

Input Format

A single line of input containing 9 space separated integers.

Output Format

Print the 3X3 NumPy array.

Submissions

Leaderboard

Sample Input

1 2 3 4 5 6 7 8 9

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Line: 5 Col: 1

Sample Output

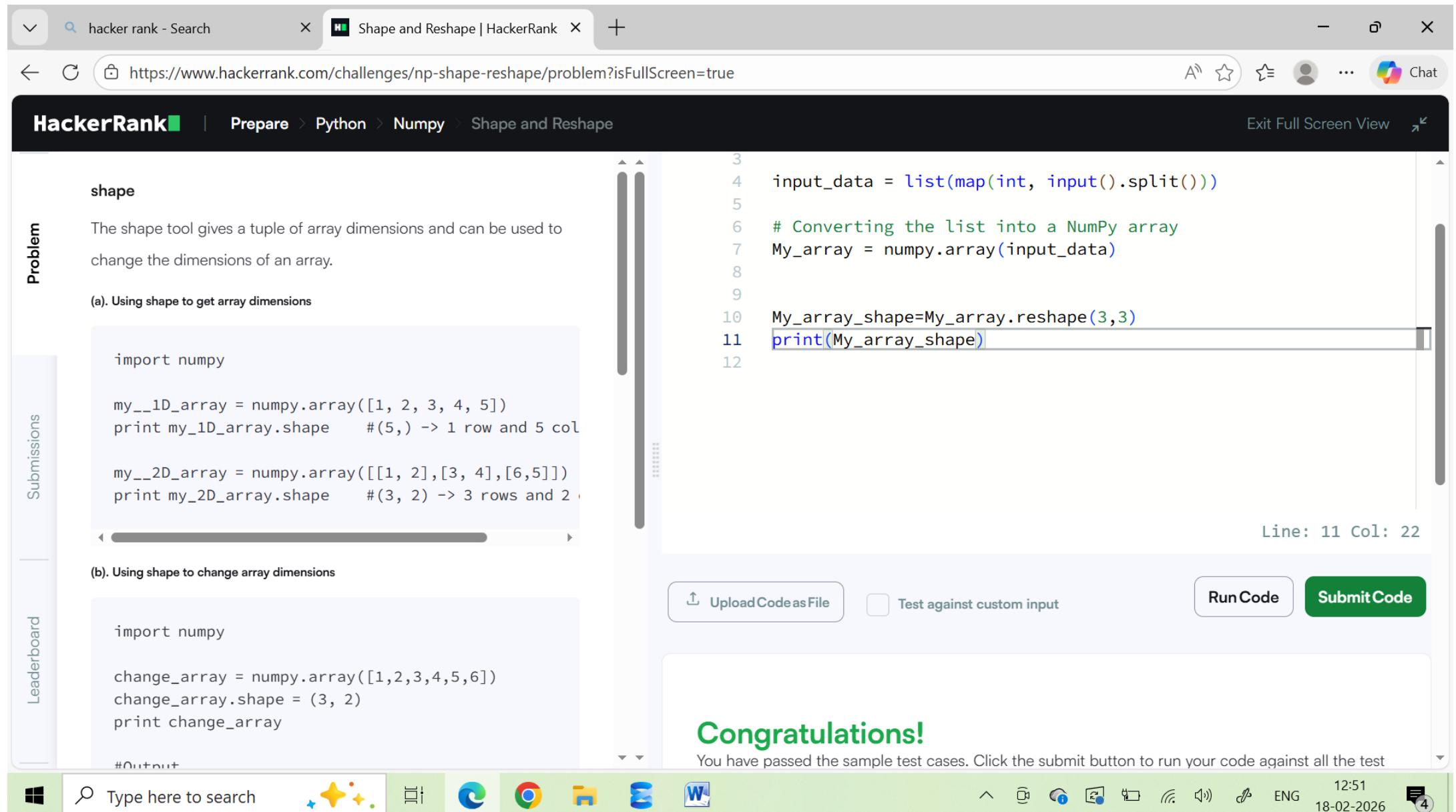
[[1 2 3]  
 [4 5 6]  
 [7 8 9]]

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hacker rank - Search    Transpose and Flatten | HackerRank    flatten array python syntax - Search

https://www.hackerrank.com/challenges/np-transpose-and-flatten/problem?isFullScreen=true

## HackerRank | Prepare > Python > Numpy > Transpose and Flatten

### Problem

#### 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  $N \times M$  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  $M$

```
4
5 # print("ENTER THE DIMENSIONS OF THE MATRIX nXm")
6 n,m=map(int,input().split())
7
8 # print("Enter the ROW elements")
9 matrix=[]
10 for i in range(n):
11     row=list(map(int,input().split()))
12     matrix.append(row)
13
14 My_array=numpy.array(matrix)
15 # print("Transpose matrix")
16 trans=numpy.transpose(My_array)
17 print(trans)
18 print(My_array.flatten())
19
```

Line: 5 Col: 1

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hacker rank - Search    Concatenate | HackerRank    flatten array python syntax - Search

https://www.hackerrank.com/challenges/np-concatenate/problem?isFullScreen=true

## HackerRank | Prepare > Python > Numpy > Concatenate

### Task

You are given two integer arrays of size  $N \times P$  and  $M \times P$  ( $N$  &  $M$  are rows, and  $P$  is the column). Your task is to concatenate the arrays along axis 0.

### Input Format

The first line contains space separated integers  $N$ ,  $M$  and  $P$ .  
The next  $N$  lines contains the space separated elements of the  $P$  columns.  
After that, the next  $M$  lines contains the space separated elements of the  $P$  columns.

### Output Format

Print the concatenated array of size  $(N + M) \times P$ .

### Sample Input

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

### Code Editor

```
3 n,m,p=map(int,input().split())
4
5 matrix_1=[]
6 for i in range(n):
7     row=list(map(int,input().split()))
8     matrix_1.append(row)
9
10 array_1=numpy.array(matrix_1)
11
12 matrix_2=[]
13 for j in range(m):
14     row2=list(map(int,input().split()))
15     matrix_2.append(row2)
16
17 array_2=numpy.array(matrix_2)
18 print(numpy.concatenate((array_1,array_2), axis=0))
```

Line: 18 Col: 1

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Concatenate | HackerRank

flatten array python syntax - Search

https://www.hackerrank.com/challenges/np-concatenate/problem?isFullScreen=true

A Chat

## HackerRank | Prepare > Python > Numpy > Concatenate

### Task

You are given two integer arrays of size  $N \times P$  and  $M \times P$  ( $N$  &  $M$  are rows, and  $P$  is the column). Your task is to concatenate the arrays along axis **0**.

### Input Format

The first line contains space separated integers  $N$ ,  $M$  and  $P$ .  
The next  $N$  lines contains the space separated elements of the  $P$  columns.  
After that, the next  $M$  lines contains the space separated elements of the  $P$  columns.

### Output Format

Print the concatenated array of size  $(N + M) \times P$ .

### Sample Input

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

### Sample Output

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)

```
1 4 3 2
2 1 2
3 1 2
4 1 2
5 1 2
6 3 4
7 3 4
8 3 4
```

Download

Your Output (stdout)

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

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Zeros and Ones | HackerRank

New tab

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Chat

https://www.hackerrank.com/challenges/np-zeros-and-ones/problem?isFullScreen=true

**HackerRank** | Prepare > Python > Numpy > Zeros and Ones

**Task**

You are given the shape of the array in the form of space-separated integers, each integer representing the size of different dimensions, your task is to print an array of the given shape and integer type using the tools `numpy.zeros` and `numpy.ones`.

**Input Format**

A single line containing the space-separated integers.

**Constraints**

$1 \leq \text{each integer} \leq 3$

**Output Format**

First, print the array using the `numpy.zeros` tool and then print the array with the `numpy.ones` tool.

**Sample Input 0**

```
3 3 3
```

**Sample Output 0**

```
[0 0 0 0 0 0 0 0 0]
```

5    `dim=tuple(map(int, input().split()))`

6

7

8    `print(numpy.zeros(dim, dtype=int))`

9    `print(numpy.ones(dim, dtype=int))`

Line: 5 Col: 1

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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.

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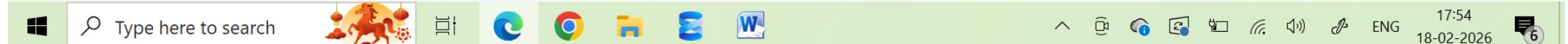
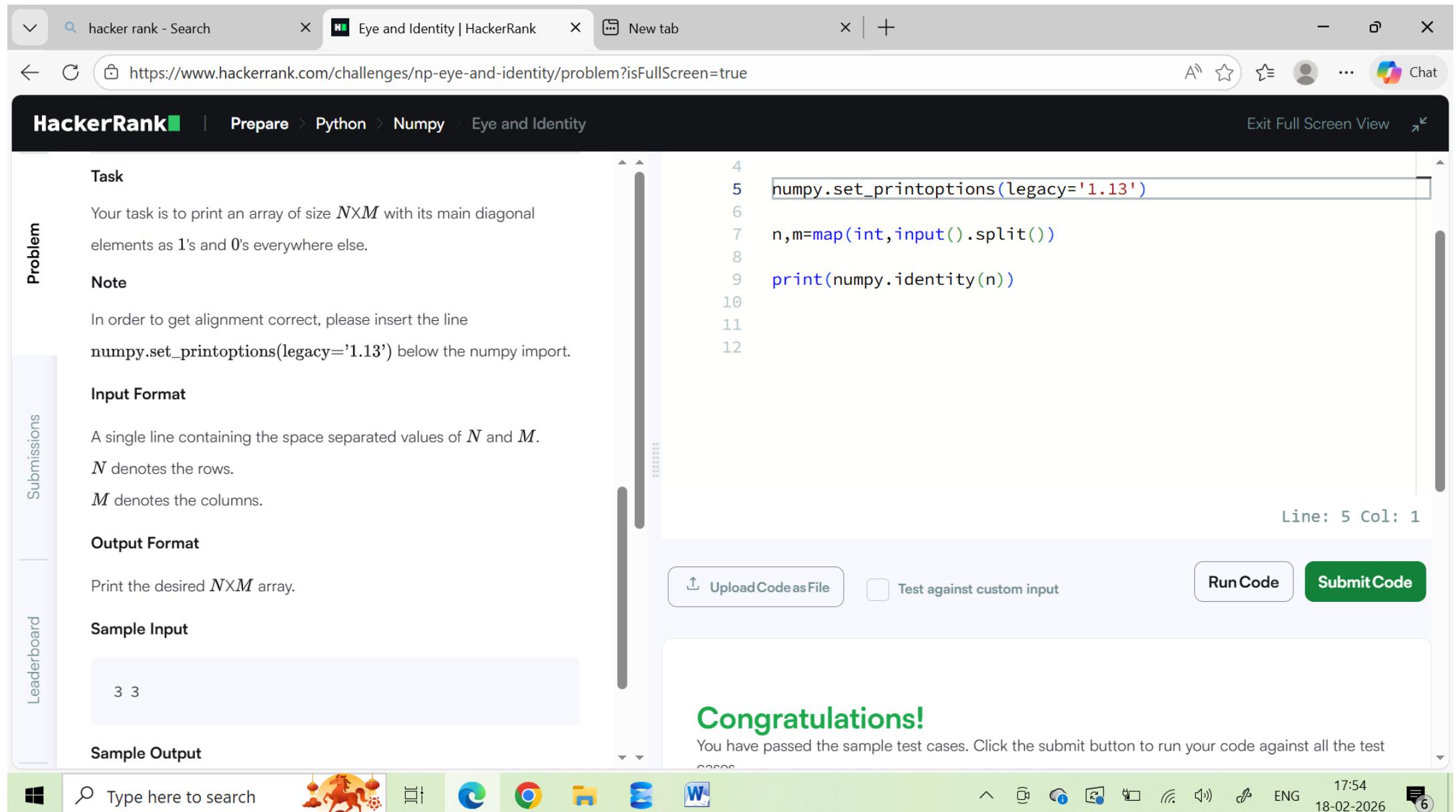
Windows Start

Search Bar

Taskbar Icons: File Explorer, Edge, Google Chrome, File Manager, Word, Powerpoint

System Icons: Volume, Battery, Network, Screen, Task View, Taskbar Buttons

System Status: ENG, 17:40, 18-02-2026, Notifications (6)



hacker rank - Search

Eye and Identity | HackerRank

difference between eye and identity

https://www.hackerrank.com/challenges/np-eye-and-identity/problem?isFullScreen=true

A ... Chat

## HackerRank | Prepare > Python > Numpy > Eye and Identity

### Task

Your task is to print an array of size  $N \times M$  with its main diagonal elements as 1's and 0's everywhere else.

### Note

In order to get alignment correct, please insert the line  
`numpy.set_printoptions(legacy='1.13')` below the numpy import.

### Input Format

A single line containing the space separated values of  $N$  and  $M$ .  
 $N$  denotes the rows.  
 $M$  denotes the columns.

### Output Format

Print the desired  $N \times M$  array.

### Sample Input

```
3 3
```

### Sample Output

```
[[1, 0, 0], [0, 1, 0], [0, 0, 1]]
```

### Code Editor

```
3 numpy.set_printoptions(legacy='1.13')
4
5 n,m=map(int,input().split())
6 print(numpy.eye(n,m))
```

Line: 6 Col: 1

Upload Code as File  Test against custom input

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hacker rank - Search

Array Mathematics | HackerRank

https://www.hackerrank.com/challenges/np-array-mathematics/problem?isFullScreen=true

HackerRank | Prepare > Python > Numpy > Array Mathematics

Exit Full Screen View

**Task**

You are given two integer arrays,  $A$  and  $B$  of dimensions  $N \times M$ .  
Your task is to perform the following operations:

1. Add ( $A + B$ )
2. Subtract ( $A - B$ )
3. Multiply ( $A * B$ )
4. Integer Division ( $A / B$ )
5. Mod ( $A \% B$ )
6. Power ( $A^{**} B$ )

**Note**

There is a method `numpy.floor_divide()` that works like `numpy.divide()` except it performs a floor division.

**Input Format**

The first line contains two space separated integers,  $N$  and  $M$ .  
The next  $N$  lines contains  $M$  space separated integers of array  $A$ .  
The following  $N$  lines contains  $M$  space separated integers of array  $B$ .

**Output Format**

Print the result of each operation in the given order under **Task**.

**Sample Input**

```
3 4
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 19 20
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 19 20
```

3  
n,m=map(int,input().split())  
mat1=[]  
5 for i in range(n):  
6 row1=list(map(int,input().split()))  
7 mat1.append(row1)  
8 array\_1=numpy.array(mat1)  
9  
10 mat2=[]  
11 for j in range(n):  
12 row2=list(map(int,input().split()))  
13 mat2.append(row2)  
14  
15 array\_2=numpy.array(mat2)  
16 print(array\_1+array\_2)  
17 print(array\_1-array\_2)  
18 print(array\_1\*array\_2)  
19 print(numpy.floor\_divide(array\_1,array\_2))  
20 print(array\_1%array\_2)  
21 print(array\_1\*\*array\_2)

Line: 10 Col: 1

Upload Code as File

Test against custom input

Run Code

Submit Code

**Congratulations!**

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19:47 18-02-2026

hacker rank - Search

Array Mathematics | HackerRank

https://www.hackerrank.com/challenges/np-array-mathematics/problem?isFullScreen=true

HackerRank | Prepare > Python > Numpy > Array Mathematics

Exit Full Screen View

**Problem**

**Task**

You are given two integer arrays,  $A$  and  $B$  of dimensions  $N \times M$ .

Your task is to perform the following operations:

1. Add ( $A + B$ )
2. Subtract ( $A - B$ )
3. Multiply ( $A * B$ )
4. Integer Division ( $A / B$ )
5. Mod ( $A \% B$ )
6. Power ( $A^{**} B$ )

**Note**

There is a method `numpy.floor_divide()` that works like `numpy.divide()` except it performs a floor division.

**Input Format**

The first line contains two space separated integers,  $N$  and  $M$ .

The next  $N$  lines contains  $M$  space separated integers of array  $A$ .

The following  $N$  lines contains  $M$  space separated integers of array  $B$ .

**Output Format**

Print the result of each operation in the given order under **Task**.

**Sample Input**

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**

```
1 4
1 2 3 4
5 6 7 8
```

Your Output (stdout)

```
1 [[ 6  8 10 12]]
2 [[-4 -4 -4 -4]]
3 [[ 5 12 21 32]]
4 [[0 0 0 0]]
5 [[1 2 3 4]]
6 [[      1     64   2187 65536]]
```

Expected Output

```
1 [[ 6  8 10 12]]
```

Download

19:48  
18-02-2026

Type here to search

Windows Start button

Search bar

Taskbar icons: File Explorer, Edge, Google Chrome, File Manager, Word

hacker rank - Search

Floor, Ceil and Rint | HackerRank

https://www.hackerrank.com/challenges/floor-ceil-and-rint/problem?isFullScreen=true

HackerRank | Prepare > Python > Numpy > Floor, Ceil and Rint

Exit Full Screen View

Problem

Submissions

Leaderboard

Task

You are given a 1-D array,  $A$ . Your task is to print the *floor*, *ceil* and *rint* of all the elements of  $A$ .

Note

In order to get the correct output format, add the line  
`numpy.set_printoptions(legacy='1.13')` below the numpy import.

Input Format

A single line of input containing the space separated elements of array  $A$ .

Output Format

On the first line, print the *floor* of  $A$ .  
On the second line, print the *ceil* of  $A$ .  
On the third line, print the *rint* of  $A$ .

Sample Input

```
my_array = numpy.array([1.1, 2.2, 3.3, 4.4, 5.5, 6.  
print numpy.rint(my_array)      # [ 1.  2.  3.]
```

```
import numpy  
numpy.set_printoptions(legacy='1.13')  
A=numpy.array(input().split(),float)  
  
print(numpy.floor(A))  
print(numpy.ceil(A))  
print(numpy.rint(A))
```

Line: 4 Col: 1

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Run Code Submit Code

Congratulations!

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

Type here to search

Windows Start Button

System Icons: Search, Task View, Edge, Chrome, File Explorer, Word, Powerpoint, Mail, etc.

System Status: Battery, Signal, Volume, Network, etc.

System Date/Time: 20:40 18-02-2026

Notification: 8 notifications