Shape and Reshape

102/115 challenges solved

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shape

The shape tool gives a tuple of array dimensions and can be used to change the dimensions of an array.

(a). Using shape to get array dimensions

```
import numpy

my__1D_array = numpy.array([1, 2, 3, 4, 5])
print my_1D_array.shape    #(5,) -> 1 row and 5 columns

my__2D_array = numpy.array([[1, 2],[3, 4],[6,5]])
print my_2D_array.shape    #(3, 2) -> 3 rows and 2 columns
```

(b). Using shape to change array dimensions

```
import numpy

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

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

reshape

The reshape tool gives a new shape to an array without changing its data. It creates a new array and does not modify the original array itself.

```
import numpy

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

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

Task

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

Input Format

A single line of input containing **9** space separated integers.

Output Format

Print the **3**X**3** NumPy array.

Sample Input

```
1 2 3 4 5 6 7 8 9
```

Sample Output

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

Change Theme Language Python 3

```
1  import numpy
2
3  lst = list(map(int, input().split()))
4  a = numpy.array(lst)
5  a = numpy.reshape(a, (3,3))
6  print(a)
7
8
9
```

EMACS Line: 9 Col: 1

Upload Code as File | Test against custom input | Run Code | Submit Code

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89%

Congratulations

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

Next Challenge

Test case 0

Test case 1

Test case 2

Compiler Message

Success

Input (stdin) Download

```
1 2 3 4 5 6 7 8 9
```

Expected Output Download

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