

PRACTICE

COMPETE

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Practice > Python > Numpy > Mean, Var, and Std

Mean, Var, and Std ☆

37/115 challenges solved

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Problem	Submissions	Leaderboard	Discussions
mean			
The mean tool computes the arithmetic mean along the specified axis.			xis. Max Subn
import numpy			
my_array = numpy.array([[1, 2], [3, 4]])			NEE
<pre>print numpy.mean(my_array, axis = 0) #Output: [2. 3. print numpy.mean(my_array, axis = 1) #Output: [1.5 3. print numpy.mean(my_array, axis = None) #Output: 2.5</pre>			[1.5 :]
print numpy.me		#Output: 2	
4			RATE
By default, the axis is None. Therefore, it computes the mean of the flattened			flattened 🗘
array.			MOI
var			MOI
The var tool computes the arithmetic variance along the specified axis.			
import numpy			<u></u>
my_array = numpy.array([[1, 2], [3, 4]])			f
print numpy.va	ar(my_array, axis = ar(my_array, axis = ar(my_array, axis = ar(my_array)	= 1) #Output :	[0.25 : 1.25
4			>
By default, the axis is None. Therefore, it computes the variance of the			

Author **DOSHI** Difficulty Easy Max Score 20 Submitted By 8683 NEED HELP?

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flattened array.

std

The std tool computes the arithmetic standard deviation along the specified axis.

```
import numpy

my_array = numpy.array([ [1, 2], [3, 4] ])

print numpy.std(my_array, axis = 0)  #Output : [ 1. 1.
print numpy.std(my_array, axis = 1)  #Output : [ 0.5 @
print numpy.std(my_array, axis = None)  #Output : 1.1180339
print numpy.std(my_array)  #Output : 1.1180339
```

By default, the axis is None. Therefore, it computes the standard deviation of the flattened array.

Task

You are given a 2-D array of size $N \times M$.

Your task is to find:

- 1. The mean along axis ${f 1}$
- 2. The var along axis 0
- 3. The std along axis *None*

Input Format

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

The next N lines contains M space separated integers.

Output Format

First, print the mean.

Second, print the var.

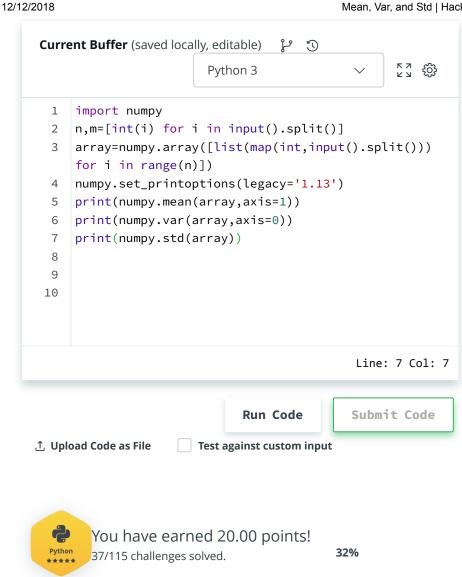
Third, print the std.

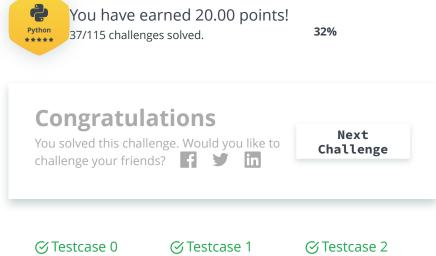
Sample Input

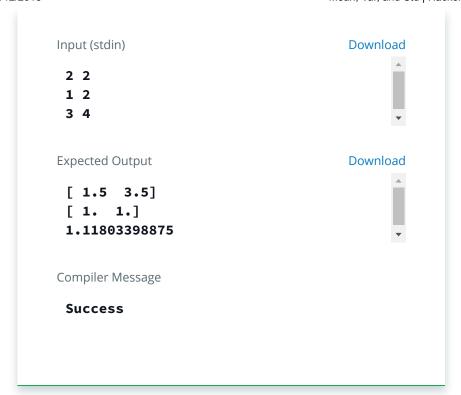
- 2 2
- 1 2
- 3 4

Sample Output

```
[ 1.5 3.5]
[ 1. 1.]
1.11803398875
```







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