Mean, Var, and Std

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mean

The mean tool computes the arithmetic mean along the specified axis.

```
import numpy

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

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
print numpy.mean(my_array)                  #Output : 2.5
```

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

var

The var tool computes the arithmetic variance along the specified axis.

```
import numpy

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

print numpy.var(my_array, axis = 0)        #Output : [ 1.  1.
print numpy.var(my_array, axis = 1)        #Output : [ 0.25
print numpy.var(my_array, axis = None)     #Output : 1.25
print numpy.var(my_array)                  #Output : 1.25
```

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

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Difficulty Easy

Max Score 20

Submitted By 8683

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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  0
print numpy.std(my_array, axis = None)     #Output : 1.1180
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 NXM.

Your task is to find:

1. The mean along axis 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
```

Current Buffer (saved locally, editable)

Python 3

```
1  import numpy
2  n,m=[int(i) for i in input().split()]
3  array=numpy.array([list(map(int,input().split()))
   for i in range(n)])
4  numpy.set_printoptions(legacy='1.13')
5  print(numpy.mean(array,axis=1))
6  print(numpy.var(array,axis=0))
7  print(numpy.std(array))
8
9
10
```

Line: 7 Col: 7

Run Code | Submit Code

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Python ★★★★★

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37/115 challenges solved. 32%

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Next Challenge

Testcase 0 Testcase 1 Testcase 2

Input (stdin) Download

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

Expected Output Download

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

Compiler Message

```
Success
```