

AUDITOR, Maricar

NUMPY

Problem 1

The screenshot shows the Spyder Python 3.7 IDE. The editor window contains the following code:

```
1 import numpy as np
2 X=np.random.random((5,5))
3 m=np.mean(X)
4 sd=np.std(X)
5 Z=(X-m)/sd
6 np.save('X_normalized',Z)
7
8
9
```

The Variable explorer shows the following variables:

Name	Type	Size	Value
X	float64	(5, 5)	[[0.00814772 0.65244581 0.44136531 0.270... [0.03531515 ...
Z	float64	(5, 5)	[[-1.50579012 0.52395788 -0.14101417 -0... [-1.42 ...
m	float64	1	0.4861271076012258
sd	float64	1	0.3174276270539634

The Python console shows the following error:

```
AttributeError: 'numpy.ndarray' object has no attribute 'sd'
```

The error occurs at line 11, where the variable `sd` is used in the `np.save` function.

Problem 2

The screenshot shows the Spyder Python 3.7 IDE. The editor window contains the following code:

```
1 import numpy as np
2 A=np.array(range(1,101))
3 A.resize(10,10)
4 sqr=A**2
5 div=sqr[sqr%3==0]
6 np.save('div_by_3',div)
7
8
9
```

The Variable explorer shows the following variables:

Name	Type	Size	Value
A	int32	(10, 10)	[[1 2 3 ... 8 9 10] [11 12 13 ... 18 19 20]
div	int32	(33,)	ndarray object of numpy module
m	int32	(100,)	[1 2 3 ... 98 99 100]
sqr	int32	(10, 10)	ndarray object of numpy module

The Python console shows the following error:

```
AttributeError: 'numpy.ndarray' object has no attribute 'sd'
```

The error occurs at line 11, where the variable `sd` is used in the `np.save` function.