Random Permutations

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Random Permutations of Elements

A permutation refers to an arrangement of elements. e.g. [3, 2, 1] is a permutation of [1, 2, 3] and vice-versa.

The NumPy Random module provides two methods for this: `shuffle()` and `permutation()`.

Shuffling Arrays

Shuffle means changing arrangement of elements in-place. i.e. in the array itself.

Example

Randomly shuffle elements of following array:

```
from numpy import random
import numpy as np

arr = np.array([1, 2, 3, 4, 5])

random.shuffle(arr)

print(arr)
```

Try it Yourself »

The `shuffle()` method makes changes to the original array.

Generating Permutation of Arrays

Example

Generate a random permutation of elements of following array:

```
from numpy import random
import numpy as np

arr = np.array([1, 2, 3, 4, 5])

print(random.permutation(arr))
```

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The `permutation()` method *returns* a re-arranged array (and leaves the original array un-changed).

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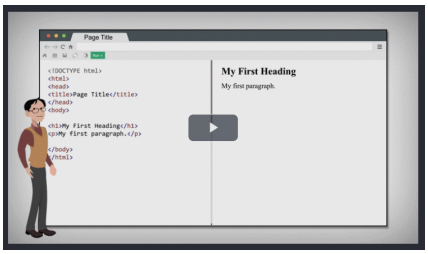

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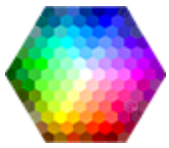

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