

# Random Permutations

< Previous</pre>

Next >

## 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**

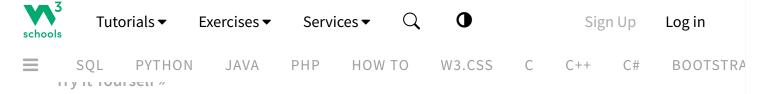
Shuffle means changing arrangement of elements in-place. i.e. in the array itself.

## Example

Get your own Python Server

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)
```



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

## Generating Permutation of Arrays

### Example

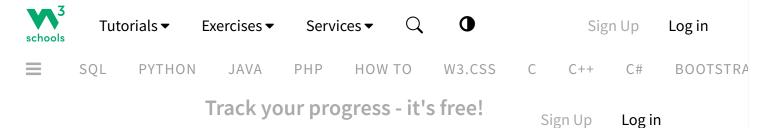
Generate a random permutation of elements of following array:

```
from numpy import random
import numpy as np

arr = np.array([1, 2, 3, 4, 5])
print(random.permutation(arr))
```

Try it Yourself »

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

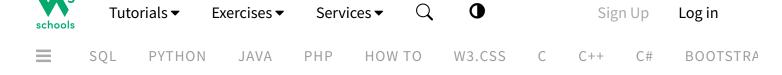




**COLOR PICKER** 







**GET CERTIFIED** 

**FOR TEACHERS** 

**FOR BUSINESS** 

**CONTACT US** 

#### **Top Tutorials**

HTML Tutorial
CSS Tutorial
JavaScript Tutorial
How To Tutorial
SQL Tutorial
Python Tutorial
W3.CSS Tutorial
Bootstrap Tutorial
PHP Tutorial
Java Tutorial
c++ Tutorial
jQuery Tutorial

### **Top References**

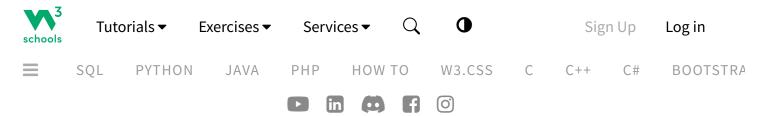
HTML Reference
CSS Reference
JavaScript Reference
SQL Reference
Python Reference
W3.CSS Reference
Bootstrap Reference
PHP Reference
HTML Colors
Java Reference
Angular Reference
jQuery Reference

### **Top Examples**

HTML Examples
CSS Examples
JavaScript Examples
How To Examples
SQL Examples
Python Examples
W3.CSS Examples
Bootstrap Examples
PHP Examples
Java Examples

#### **Get Certified**

HTML Certificate
CSS Certificate
JavaScript Certificate
Front End Certificate
SQL Certificate
Python Certificate
PHP Certificate
jQuery Certificate
Java Certificate
C++ Certificate



#### FORUM ABOUT ACADEMY

W3Schools is optimized for learning and training. Examples might be simplified to improve reading and learning.

Tutorials, references, and examples are constantly reviewed to avoid errors, but we cannot warrant full correctness

of all content. While using W3Schools, you agree to have read and accepted our <u>terms of use</u>, <u>cookie and privacy policy</u>.

Copyright 1999-2025 by Refsnes Data. All Rights Reserved. W3Schools is Powered by W3.CSS.