NumPy ones()

Summary: in this tutorial, you'll learn how to use the numpy `ones()` function to create a numpy array of a given shape whose elements are filled with ones.

The `ones()` function of the `numpy` module allows you to create a numpy array (https://www.pythontutorial.net/python-numpy/create-numpy-array/) of a given shape whose elements are filled with ones.

For example, the following uses the `ones()` function to create an array with three axes, the first axis has two elements, the second axis has three elements, and the third axis has 4 elements:

```
import numpy as np

a = np.ones((2, 3, 2))
print(a)
```

Output:

```
[[[1. 1.]
  [1. 1.]
  [1. 1.]]
```

```
 [[1. 1.]
  [1. 1.]
  [1. 1.]]]
```

By default, `ones()` function uses `float64` for its elements. For example:

```
import numpy as np

a = np.ones((2, 3, 2))
print(a.dtype)
```

Output:

```
float64
```

To use a different type, you need to specify it using the `dtype` argument. For example:

```
import numpy as np

a = np.ones((2, 3, 4), dtype=np.int32)
print(a)
print(a.dtype)
```

Output:

```
[[[1 1]
  [1 1]
  [1 1]]

 [[1 1]
  [1 1]
  [1 1]]]
int32
```

In this example, we use `int32` type for the elements. Therefore, you don't see the decimal point (.) appearing on each number.

Summary

- Use numpy `ones()` function to create an array of a given shape whose elements are filled with ones.