How to create a zero-dimensional array

井民全, Jing, mqjing@gmail.com

Note

> What you create with
>
> ```
> a = np.array(1)
> ```
>
> is a zero-dimensional array, and these cannot be indexed. You also don't *need* to index it -- you can use `a` directly as if it were a scalar value. If you really need the value in a different type, say `float`, you can explicitly convert it with `float(a)`. If you need it in the base type of the array, you can use `a.item()` or `a[()]`.
>
> Note that the zero-dimensional array is *mutable*. If you change the value of the single entry in the array, this will be visible via all references to the array you stored. Use `a.item()` if you want to store an immutable value.
>
> If you want a one-dimensional array with a single element instead, use
>
> ```
> a = np.array([1])
> ```
>
> You can access the single element with `a[0]` now.

Ref:

Command

```
x= np.array( 1 )    # create an zero-dimemnsionaly array   (np.array([1])

or
```

```
x=np.zeros(())
```

Code

Create a zero dimensional array with shape ()

```
x= np.array(1)

print('x.shape=', x.shape)
print('x.ndim = ', x.ndim)
print('x = ', x)   # access demo
```

Result

x.shape= ()

x.ndim = 0

x = 1

Create a zero dimensional array with shape ()

```
x=np.zeros(())
print('x.shape=', x.shape)
print('x.ndim = ', x.ndim)
```

Result

x.shape= ()

x.ndim = 0

Reference

- https://stackoverflow.com/questions/9814226/error-extracting-element-from-an-array-python