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Python: Division

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In Python, there are two kinds of division: integer division and float division.

Python 2 syntax

```
from __future__ import division

# floating point division
print 4 / 3

# integer division
print 4 // 3
```

Python 3 syntax

```
print(4 / 3)
print(4 // 3)
```

Gives the output

```
1.3333333333333333
1
```

Note: The `__` in `__future__` is a double underscore.

During the time of Python 2, when you divided one integer by another integer, no matter what, the result would always be an integer.

For example:

```
>>> 4/3
1
```

In order to make this a float division, you would need to convert one of the arguments into a float.

For example:

```
>>> 4/3.0
1.3333333333333333
```

Since Python doesn't declare data types in advance, you never know when you want to use integers and when you want to use a float. Since floats lose precision, it's not advised to use them in integral calculations.

To solve this problem, future Python modules included a new type of division called integer division given by the operator `//`.

Now, `/` performs float division, and `//` performs integer division.

In **Python 2**, we will import a feature from the module __future__ called `division`.

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