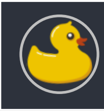
به نام خدا

hello_world.py

</ Python Programming with Algorithmic Approach Course />

Teacher



MohammadReza Gholami

Code is poetry written for machines!

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Variables

Variables are containers for storing data values.

Creating Variables
Python has no command for declaring a variable.

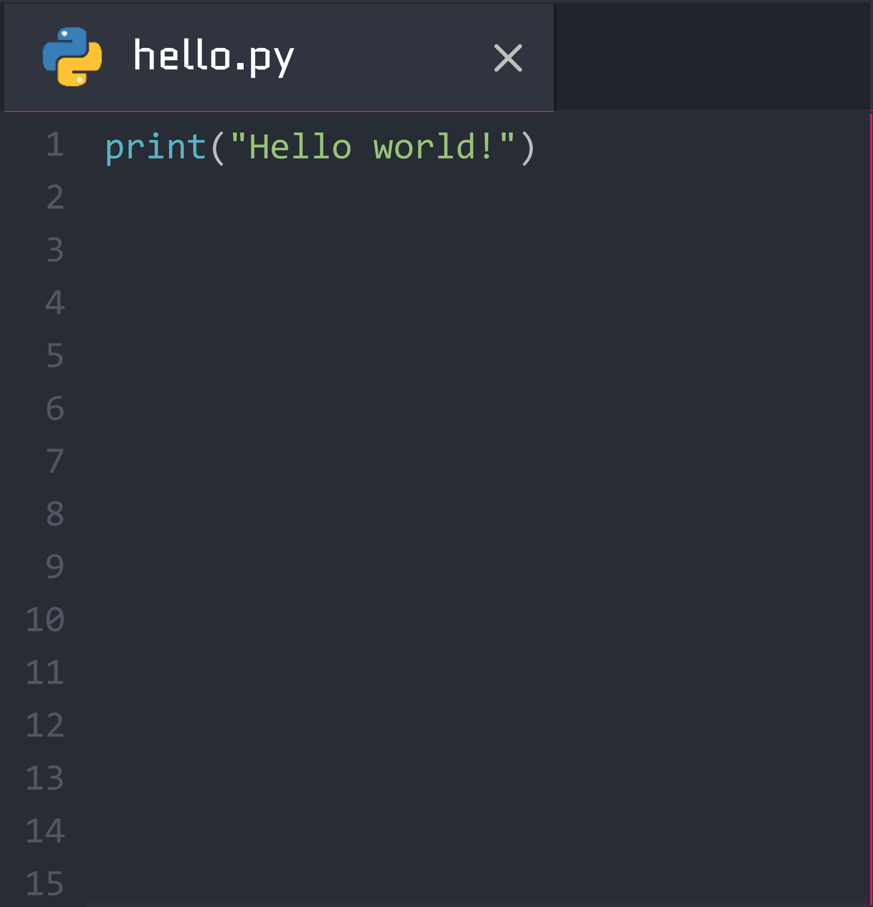
A variable is created the moment you first assign a value to it.

Variable_name = value

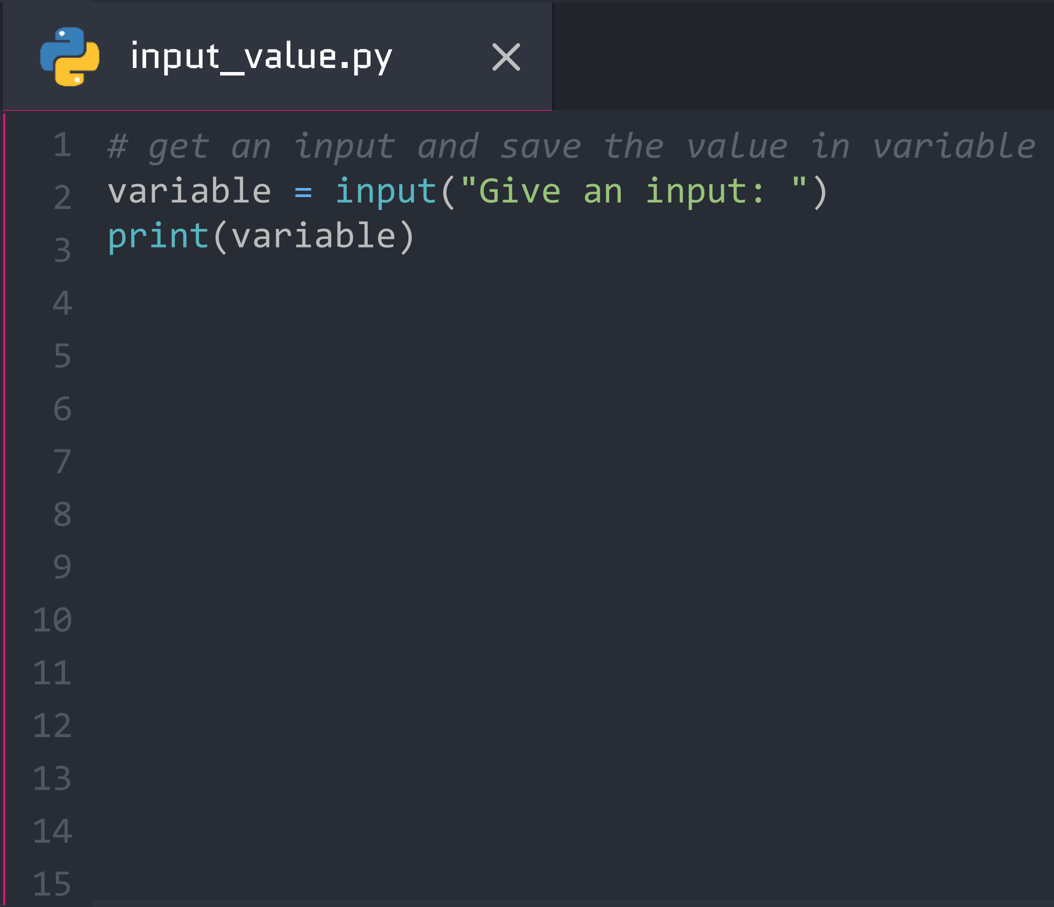
```
a = '3'
b = 3
c = 3.0
x = str(3)  # x will be '3'
y = int(3)  # y will be 3
z = float(3)  # z will be 3.0

print(type(x))
```

print and input functions [reminding]



```python
print("Hello world!")
```



```python
# get an input and save the value in variable
variable = input("Give an input: ")
print(variable)
```

Data Types

Built-in Data Types
In programming, data type is an important concept.

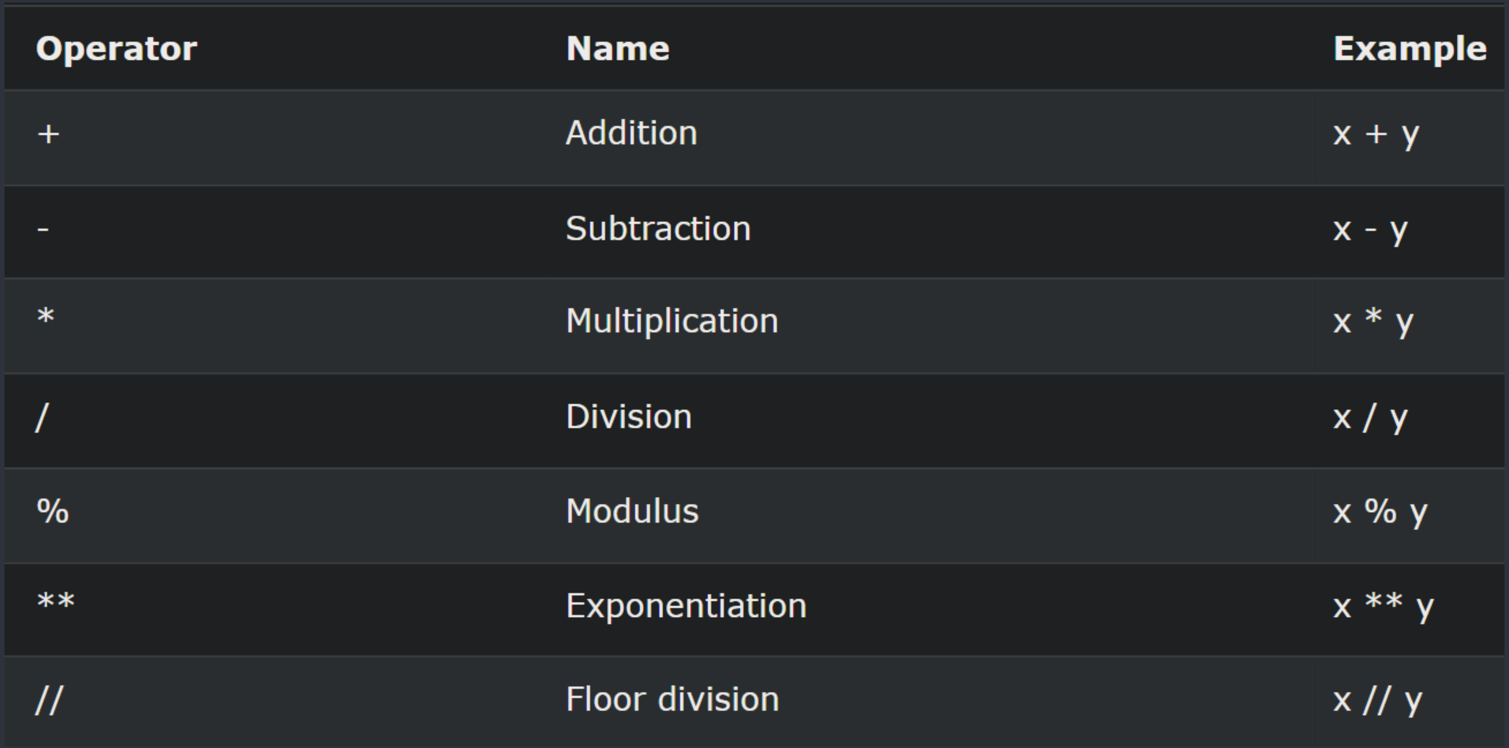
Variables can store data of different types, and different types can do different things.

Python has the following data types built-in by default, in these categories:

Text Type:	str
Numeric Types:	int, float, complex
Sequence Types:	list, tuple, range
Mapping Type:	dict
Set Types:	set, frozenset
Boolean Type:	bool
Binary Types:	bytes, bytearray, memoryview
None Type:	NoneType

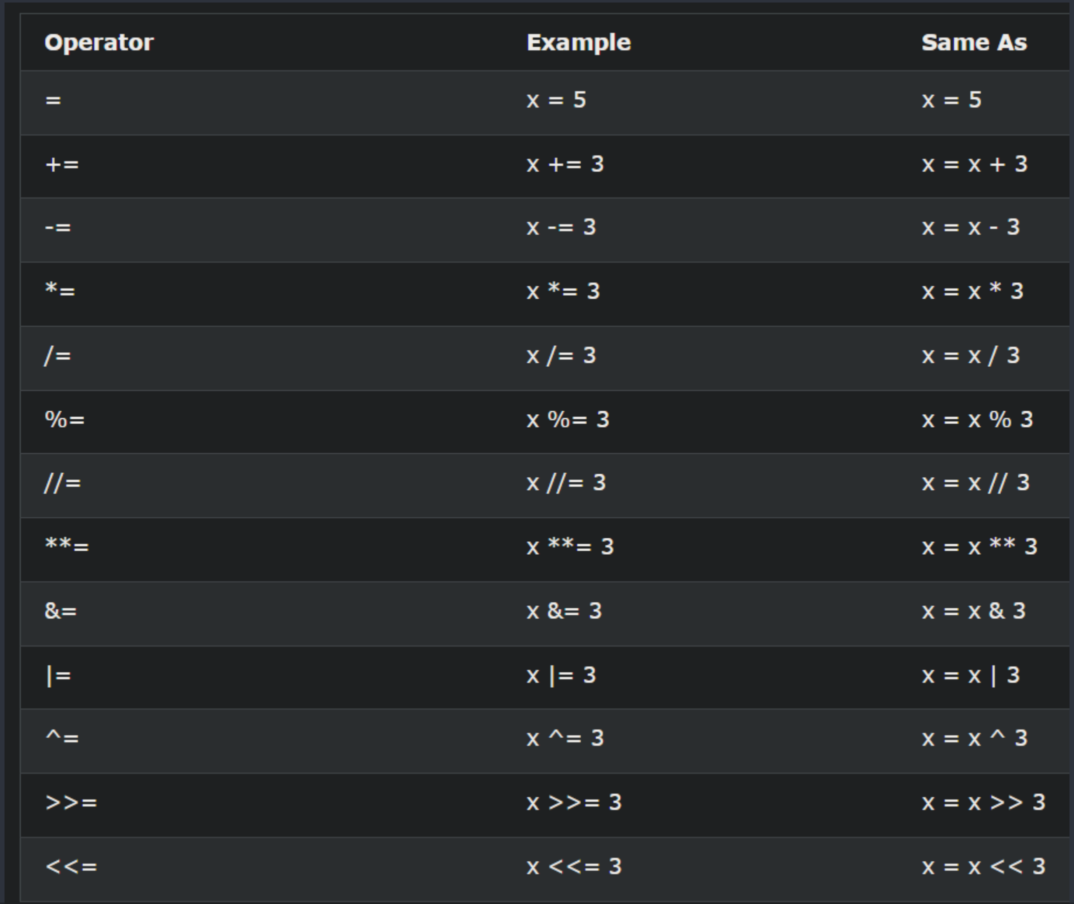
Operators

Operators are used to perform operations on variables and values.



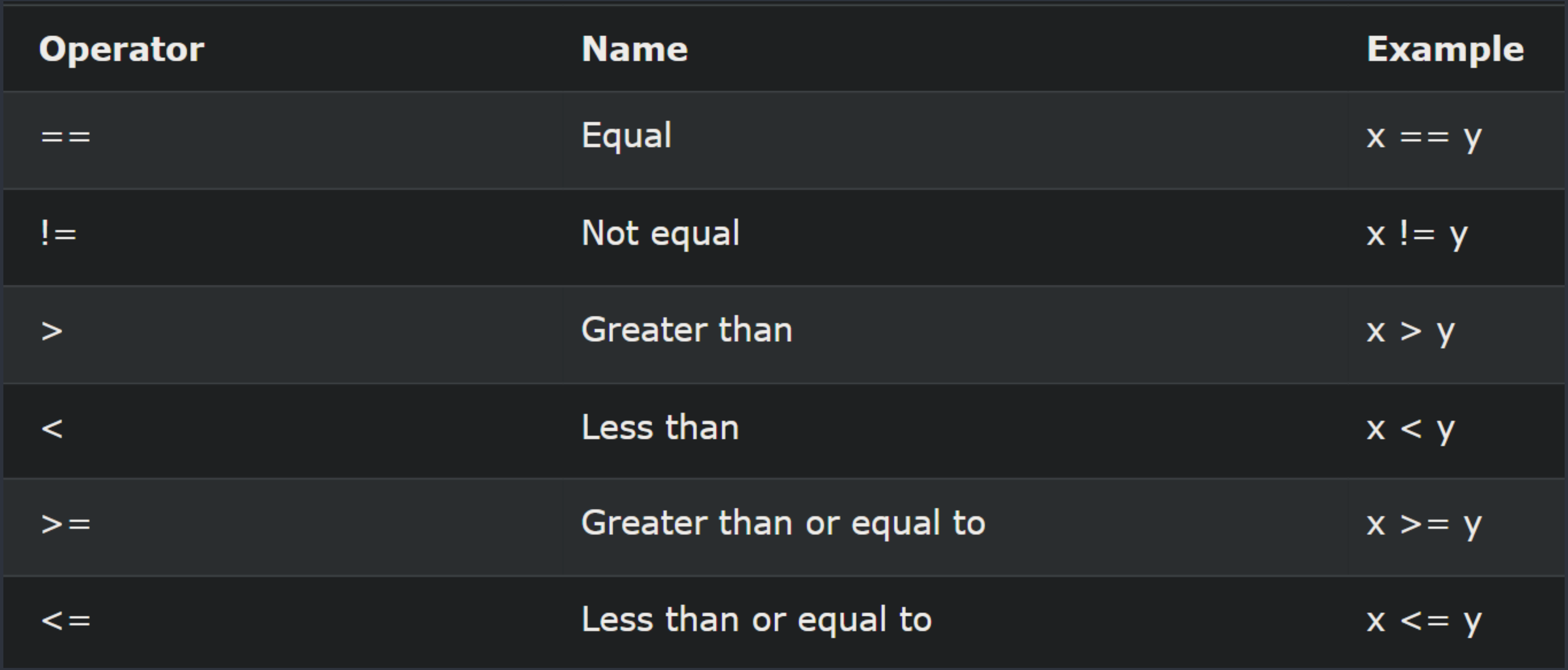
Operator	Name	Example
+	Addition	x + y
-	Subtraction	x - y
*	Multiplication	x * y
/	Division	x / y
%	Modulus	x % y
**	Exponentiation	x ** y
//	Floor division	x // y

Operators



Operator	Example	Same As
=	x = 5	x = 5
+=	x += 3	x = x + 3
-=	x -= 3	x = x - 3
*=	x *= 3	x = x * 3
/=	x /= 3	x = x / 3
%=	x %= 3	x = x % 3
//=	x //= 3	x = x // 3
**=	x **= 3	x = x ** 3
&=	x &= 3	x = x & 3
|=	x |= 3	x = x | 3
^=	x ^= 3	x = x ^ 3
>>=	x >>= 3	x = x >> 3
<<=	x <<= 3	x = x << 3

Operators



Operator	Name	Example
==	Equal	x == y
!=	Not equal	x != y
>	Greater than	x > y
<	Less than	x < y
>=	Greater than or equal to	x >= y
<=	Less than or equal to	x <= y

If ... Else

Python Conditions and If statements

Python supports the usual logical conditions from mathematics:

- Equals: `a == b`
- Not Equals: `a != b`
- Less than: `a < b`
- Less than or equal to: `a <= b`
- Greater than: `a > b`
- Greater than or equal to: `a >= b`

These conditions can be used in several ways, most commonly in "if statements" and loops.

An "if statement" is written by using the `if` keyword.

If ... Else

```
if condition1:
    # code 1
    pass
elif condition2:
    # code 2
    pass
else:
    # code 3
    pass
```

The End!

THANKS!

Do you have any questions?

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Telegram support group