



Python Data Types

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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`



Getting the Data Type

You can get the data type of any object by using the `type()` function:

Example

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Print the data type of the variable x:

```
x = 5
print(type(x))
```

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Setting the Data Type

In Python, the data type is set when you assign a value to a variable:

Example	Data Type	Try it
x = "Hello World"	str	Try it »
x = 20	int	Try it »
x = 20.5	float	Try it »
x = 1j	complex	Try it »
x = ["apple", "banana", "cherry"]	list	Try it »
x = ("apple", "banana", "cherry")	tuple	Try it »
x = range(6)	range	Try it »
x = {"name" : "John", "age" : 36}	dict	Try it »

<code>x = True</code>	bool	Try it »
<code>x = b"Hello"</code>	bytes	Try it »
<code>x = bytearray(5)</code>	bytearray	Try it »
<code>x = memoryview(bytes(5))</code>	memoryview	Try it »
<code>x = None</code>	NoneType	Try it »

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Setting the Specific Data Type

If you want to specify the data type, you can use the following constructor functions:

Example	Data Type	Try it
<code>x = str("Hello World")</code>	str	Try it »



<code>x = complex(1j)</code>	complex	Try it »
<code>x = list(("apple", "banana", "cherry"))</code>	list	Try it »
<code>x = tuple(("apple", "banana", "cherry"))</code>	tuple	Try it »
<code>x = range(6)</code>	range	Try it »
<code>x = dict(name="John", age=36)</code>	dict	Try it »
<code>x = set(("apple", "banana", "cherry"))</code>	set	Try it »
<code>x = frozenset(("apple", "banana", "cherry"))</code>	frozenset	Try it »
<code>x = bool(5)</code>	bool	Try it »
<code>x = bytes(5)</code>	bytes	Try it »
<code>x = bytearray(5)</code>	bytearray	Try it »
<code>x = memoryview(bytes(5))</code>	memoryview	Try it »

Exercise [?]

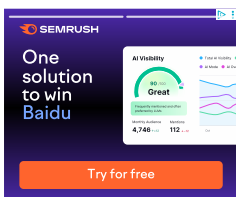
If `x = 5`, what is a correct syntax for printing the data type of the variable `x`?

- ☐ `print(dtype(x))`
- ☐ `print(type(x))`
- ☐ `print(x.dtype())`

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