

# 20 Most Used Magic Methods in Python OOP



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Magic Method	Syntax	Usage/Description
<code>__new__</code>	<code>__new__(cls, *args, **kwargs):</code>	Invoked before <code>__init__</code> to allocate memory to object
<code>__init__</code>	<code>__init__(self, *args, **kwargs):</code>	Invoked after <code>__new__</code> to initialise the object
<code>__str__</code>	<code>__str__(self):</code>	Invoked when <code>str(obj)</code> or <code>print(obj)</code> is used
<code>__int__</code>	<code>__int__(self):</code>	Invoked when <code>int(obj)</code> is used
<code>__len__</code>	<code>__len__(self):</code>	Invoked when <code>len(obj)</code> is used
<code>__call__</code>	<code>__call__(self, *args, **kwargs):</code>	Invoked when class object is called as a function: <code>obj()</code>
<code>__getitem__</code>	<code>__getitem__(self, key):</code>	Invoked when object is indexed: <code>obj[key]</code>
<code>__setitem__</code>	<code>__setitem__(self, key, value):</code>	Invoked when object is indexed and value is set: <code>obj[key]=value</code>
<code>__delitem__</code>	<code>__delitem__(self, key):</code>	Invoked when object's index is deleted: <code>del obj[key]</code>
<code>__contains__</code>	<code>__contains__(self, item):</code>	Invoked when the <code>in</code> operator is used: <code>item in obj</code>
<code>__bool__</code>	<code>__bool__(self):</code>	Invoked when object is used in boolean context: <code>if obj</code> or <code>bool(obj)</code>
<code>__iter__</code>	<code>__iter__(self):</code>	Invoked when object is iterated: <code>for x in obj</code>
<code>__eq__</code>	<code>__eq__(self, other):</code>	Invoked when <code>==</code> operator is used to compare two objects: <code>obj1 == obj2</code>
<code>__ne__</code>	<code>__ne__(self, other):</code>	Invoked when <code>!=</code> operator is used to compare two objects: <code>obj1 != obj2</code>
<code>__gt__</code>	<code>__gt__(self, other):</code>	Invoked when <code>&gt;</code> operator is used to compare two objects: <code>obj1 &gt; obj2</code>
<code>__add__</code>	<code>__add__(self, other):</code>	Invoked when two objects are added: <code>obj1 + obj2</code>
<code>__mul__</code>	<code>__mul__(self, other):</code>	Invoked when two objects are multiplied: <code>obj1 * obj2</code>
<code>__abs__</code>	<code>__abs__(self):</code>	Invoked to compute absolute value of object: <code>abs(obj)</code>
<code>__neg__</code>	<code>__neg__(self):</code>	Invoked when unary operator <code>-</code> is used on an object: <code>-obj</code>
<code>__invert__</code>	<code>__invert__(self):</code>	Invoked when <code>~</code> (tilde) operator is used to invert an object: <code>~obj</code>