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**Python - Magic or Dunder Methods**

The special Python methods with a double underscore at the beginning and end are known as magic methods.

They go by the name of "dunder techniques."

Magic methods are not intended to be called directly by the user; instead, they are called internally by the class when a particular action is taken.

For instance, the \_\_add\_\_() method is executed internally when you add two numbers using the + operator.

Many magic methods in Python are defined by built-in classes.

To determine the amount of magic methods a class has inherited, use the dir() function.

The list that follows, for instance, includes each attribute and method that the int class has to offer.

**What is Python \*args ?**

To pass a variable number of arguments to a function in Python, use the special syntax \*args in the function specification. It is used to pass a variable-length, keyword-free argument list.

By convention, the sign \* is frequently used with the word args in the syntax for taking in a variable number of arguments.

You can accept additional arguments using \*args than the number of formal arguments you previously defined. Any number of additional arguments can be added to your current formal parameters using \*args (including zero extra arguments).

For instance, we wish to create a multiply function that can multiple any number of inputs simultaneously. You can carry it out using \*args.

By using the \*, the variable we associate with the \* is made iterable, allowing you to run higher-order functions like map and filter as well as other operations on it.

**What is Python \*\*kwargs**

Python function definitions can send a keyworded, variable-length argument list by using the unique syntax \*\*kwargs. With the double star, we use the name kwargs. The double star's ability to pass through keyword arguments is the cause for this (and any number of them).

A keyword argument is used to give the variable a name before passing it to the function.

The kwargs can be viewed as a dictionary that associates each term with the value that is passed along with it. Because of this, there doesn't appear to be any sequence in which the kwargs were printed out when we iterate through them.

**Abstraction and Encapsulation in Python**

**Abstraction**

When using abstraction, internal details are hidden and only functionalities are displayed. Giving things names that convey the core notion of what a function or entire programme accomplishes is the process of abstracting something.

**Encapsulation**

Encapsulation is used to restrict access to methods and variables. In encapsulation, code and data are wrapped together within a single unit from being modified by accident.