1. Magic functions in python are the methods that start and end with double underscores.

For example -

\_\_new\_\_ : to get called in an object’s instantiation

\_\_del\_\_ : destructor

\_\_abs\_\_ : implements behaviour for the built-in abs()

\_\_neg\_\_ : Implements behaviour for the built-in abs()

1. If we don't override the \_\_str\_\_ function , the output will be the name of the class and where it’s defined , and the memory address of the object. If a class doesn’t have a .\_\_str\_\_() method defined, then str() will also default to the object’s .\_\_repr\_\_() method. This method will provide an output that’s easier for the user to understand.
2. The \_\_eq\_\_ function defines behaviour for the equality operator, ==. If we wouldn’t override the function , we wouldn’t be able to compare between 2 objects, because when you try to object1 == object2, it compares the memory addresses of the objects and not by their value.
3. two methods cannot have the same name in Python, so overloading is a feature that allows for two or more functions to do different functionalities with the same name but with different numbers of parameters.

Operator overloading is just like overloading , just with operators and not functions, means you are giving extended meaning to the operator beyond their predefined meaning.