`object.__del__(self)`

Called when the instance is about to be destroyed. This is also called a destructor. If a base class has a `__del__()` method, the derived class's `__del__()` method, if any, must explicitly call it to ensure proper deletion of the base class part of the instance. Note that it is possible (though not recommended!) for the `__del__()` method to postpone destruction of the instance by creating a new reference to it. It may then be called at a later time when this new reference is deleted. It is not guaranteed that `__del__()` methods are called for objects that still exist when the interpreter exits.

Note `del x` doesn't directly call `x.__del__()` — the former decrements the reference count for `x` by one, and the latter is only called when `x`'s reference count reaches zero. Some common situations that may prevent the reference count of an object from going to zero include: circular references between objects (e.g., a doubly-linked list or a tree data structure with parent and child pointers); a reference to the object on the stack frame of a function that caught an exception (the traceback stored in `sys.exc_info()[2]` keeps the stack frame alive); or a reference to the object on the stack frame that raised an unhandled exception in interactive mode (the traceback stored in `sys.last_traceback` keeps the stack frame alive). The first situation can only be remedied by explicitly breaking the cycles; the second can be resolved by freeing the reference to the traceback object when it is no longer useful, and the third can be resolved by storing `None` in `sys.last_traceback`. Circular references which are garbage are detected and cleaned up when the cyclic garbage collector is enabled (it's on by default). Refer to the documentation for the `gc` module for more information about this topic.

Warning Due to the precarious circumstances under which `__del__()` methods are invoked, exceptions that occur during their execution are ignored, and a warning is printed to `sys.stderr` instead. Also, when `__del__()` is invoked in response to a module being deleted (e.g., when execution of the program is done), other globals referenced by the `__del__()` method may already have been deleted or in the process of being torn down (e.g. the import machinery shutting down). For this reason, `__del__()` methods should do the absolute minimum needed to maintain external invariants. Starting with version 1.5, Python guarantees that globals whose name begins with a single underscore are deleted from their module before other globals are deleted; if no other references to such globals exist, this may help in assuring that imported modules are still available at the time when the `__del__()` method is called.