12.2. copyreg — Register pickle support functions

Source code: Lib/copyreg.py

The copyreg module offers a way to define functions used while pickling specific objects. The pickle and copy modules use those functions when pickling/copying those objects. The module provides configuration information about object constructors which are not classes. Such constructors may be factory functions or class instances.

copyreg.**constructor**(*object*)

Declares *object* to be a valid constructor. If *object* is not callable (and hence not valid as a constructor), raises TypeError.

copyreg.**pickle**(*type*, *function*, *constructor=None*)

Declares that *function* should be used as a "reduction" function for objects of type *type*. *function* should return either a string or a tuple containing two or three elements.

The optional *constructor* parameter, if provided, is a callable object which can be used to reconstruct the object when called with the tuple of arguments returned by *function* at pickling time. TypeError will be raised if *object* is a class or *constructor* is not callable.

See the pickle module for more details on the interface expected of *function* and *constructor*. Note that the dispatch_table attribute of a pickler object or subclass of pickle.Pickler can also be used for declaring reduction functions.

12.2.1. Example

The example below would like to show how to register a pickle function and how it will be used:

```
>>> import copyreg, copy, pickle
>>> class C(object):
...     def __init__(self, a):
...         self.a = a
...
>>> def pickle_c(c):
...     print("pickling a C instance...")
...     return C, (c.a,)
```

```
...
>>> copyreg.pickle(C, pickle_c)
>>> c = C(1)
>>> d = copy.copy(c)
pickling a C instance...
>>> p = pickle.dumps(c)
pickling a C instance...
```