# Function Objects

There are a few functions specific to Python functions.

```
.. c:function:: PyObject* PyFunction_NewWithQualName(PyObject *code, PyObject *globals, PyObject *qual

   As :c:func:`PyFunction_New`, but also allows setting the function object's
   ``__qualname__`` attribute.  *qualname* should be a unicode object or ``NULL``;
   if ``NULL``, the ``__qualname__`` attribute is set to the same value as the
   code object's ``co_qualname`` field.

   .. versionadded:: 3.3
```

```
.. c:function:: PyObject* PyFunction_GetCode(PyObject *op)

   Return the code object associated with the function object *op*.
```

```
.. c:function:: PyObject* PyFunction_GetGlobals(PyObject *op)

   Return the globals dictionary associated with the function object *op*.
```

```
.. c:function:: PyObject* PyFunction_GetModule(PyObject *op)

   Return a :term:`borrowed reference` to the *__module__* attribute of the
   function object *op*. It can be *NULL*.

   This is normally a string containing the module name, but can be set to any
   other object by Python code.
```

```
.. c:function:: PyObject* PyFunction_GetDefaults(PyObject *op)

   Return the argument default values of the function object *op*. This can be a
   tuple of arguments or ``NULL``.
```

```
.. c:function:: int PyFunction_SetDefaults(PyObject *op, PyObject *defaults)

   Set the argument default values for the function object *op*. *defaults* must be
   ``Py_None`` or a tuple.

   Raises :exc:`SystemError` and returns ``-1`` on failure.
```

```
.. c:function:: PyObject* PyFunction_GetClosure(PyObject *op)

   Return the closure associated with the function object *op*. This can be ``NULL``
   or a tuple of cell objects.
```

**System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)function.rst`, line 92)**

Unknown directive type "c:function".

```
.. c:function:: int PyFunction_SetClosure(PyObject *op, PyObject *closure)

   Set the closure associated with the function object *op*. *closure* must be
   ``Py_None`` or a tuple of cell objects.

   Raises :exc:`SystemError` and returns ``-1`` on failure.
```

**System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)function.rst`, line 100)**

Unknown directive type "c:function".

```
.. c:function:: PyObject *PyFunction_GetAnnotations(PyObject *op)

   Return the annotations of the function object *op*. This can be a
   mutable dictionary or ``NULL``.
```

**System Message: ERROR/3 (`D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)function.rst`, line 106)**

Unknown directive type "c:function".

```
.. c:function:: int PyFunction_SetAnnotations(PyObject *op, PyObject *annotations)

   Set the annotations for the function object *op*. *annotations*
   must be a dictionary or ``Py_None``.

   Raises :exc:`SystemError` and returns ``-1`` on failure.
```