

Code Objects

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\cpython-main) (Doc) (c-api) code.rst, line 1)

Unknown directive type "highlight".

```
.. highlight:: c
```

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Unknown directive type "index".

```
.. index:: object; code, code object
```

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Unknown directive type "sectionauthor".

```
.. sectionauthor:: Jeffrey Yasskin <jyasskin@gmail.com>
```

Code objects are a low-level detail of the CPython implementation. Each one represents a chunk of executable code that hasn't yet been bound into a function.

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Unknown directive type "c:type".

```
.. c:type:: PyCodeObject
```

The C structure of the objects used to describe code objects. The fields of this type are subject to change at any time.

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Unknown directive type "c:var".

```
.. c:var:: PyTypeObject PyCode_Type
```

This is an instance of :c:type:`PyTypeObject` representing the Python :class:`code` type.

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Unknown directive type "c:function".

```
.. c:function:: int PyCode_Check(PyObject *co)
```

Return true if *co* is a :class:`code` object. This function always succeeds.

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Unknown directive type "c:function".

```
.. c:function:: int PyCode_GetNumFree(PyCodeObject *co)
```

Return the number of free variables in *co*.

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Unknown directive type "c:function".

```
.. c:function:: PyCodeObject* PyCode_New(int argcount, int kwnonlyargcount, int nlocals, int stacksize, int flags, PyObject *code, 1
```

Return a new code object. If you need a dummy code object to create a frame, use :c:func:`PyCode_NewEmpty` instead. Calling :c:func:`PyCode_New` directly can bind you to a precise Python version since the definition of the bytecode changes often.

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Unknown directive type "c:function".

```
.. c:function:: PyCodeObject* PyCode_NewWithPosOnlyArgs(int argcount, int posonlyargcount, int kwnonlyargcount, int nlocals, int sta
```

Similar to :c:func:`PyCode_New`, but with an extra "posonlyargcount" for positional-only arguments.

```
.. versionadded:: 3.8
```

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Unknown directive type "c:function".

```
.. c:function:: PyCodeObject* PyCode_NewEmpty(const char *filename, const char *funcname, int firstlineno)
```

Return a new empty code object with the specified filename, function name, and first line number. It is illegal to :func:`exec` or :func:`eval` the resulting code object.

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Unknown directive type "c:function".

```
.. c:function:: int PyCode_Addr2Line(PyCodeObject *co, int byte_offset)
```

Return the line number of the instruction that occurs on or before ``byte_offset`` and ends after it.
If you just need the line number of a frame, use :c:func:`PyFrame_GetLineNumber` instead.

For efficiently iterating over the line numbers in a code object, use the API described in PEP 626
<<https://peps.python.org/pep-0626/#out-of-process-debuggers-and-profilers>>`_.

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Unknown directive type "c:function".

.. c:function:: int PyCode_Addr2Location(PyObject *co, int byte_offset, int *start_line, int *start_column, int *end_line, int *end_column)

Sets the passed ``int`` pointers to the source code line and column numbers for the instruction at ``byte_offset``. Sets the value to ``0`` when information is not available for any particular element.

Returns ``1`` if the function succeeds and 0 otherwise.