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

Unknown directive type "highlight".

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

Tuple Objects

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main) (Doc) (c-api)tuple.rst, line 8)

Unknown directive type "index".

```
.. index:: object: tuple
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main) (Doc) (c-api)tuple.rst, line 11)

Unknown directive type "c:type".

```
.. c:type:: PyTupleObject

   This subtype of :c:type:`PyObject` represents a Python tuple object.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main) (Doc) (c-api)tuple.rst, line 16)

Unknown directive type "c:var".

```
.. c:var:: PyTypeObject PyTuple_Type

   This instance of :c:type:`PyTypeObject` represents the Python tuple type; it
   is the same object as :class:`tuple` in the Python layer.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main) (Doc) (c-api)tuple.rst, line 22)

Unknown directive type "c:function".

```
.. c:function:: int PyTuple_Check(PyObject *p)

   Return true if *p* is a tuple object or an instance of a subtype of the
   tuple type.  This function always succeeds.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main) (Doc) (c-api)tuple.rst, line 28)

Unknown directive type "c:function".

```
.. c:function:: int PyTuple_CheckExact(PyObject *p)

   Return true if *p* is a tuple object, but not an instance of a subtype of the
   tuple type.  This function always succeeds.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main) (Doc) (c-api)tuple.rst, line 34)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyTuple_New(Py_ssize_t len)
```

```
   Return a new tuple object of size *len*, or ``NULL`` on failure.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 39)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyTuple_Pack(Py_ssize_t n, ...)

   Return a new tuple object of size *n*, or ``NULL`` on failure. The tuple values
   are initialized to the subsequent *n* C arguments pointing to Python objects.
   ``PyTuple_Pack(2, a, b)`` is equivalent to ``Py_BuildValue("(OO)", a, b)``.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 46)

Unknown directive type "c:function".

```
.. c:function:: Py_ssize_t PyTuple_Size(PyObject *p)

   Take a pointer to a tuple object, and return the size of that tuple.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 51)

Unknown directive type "c:function".

```
.. c:function:: Py_ssize_t PyTuple_GET_SIZE(PyObject *p)

   Return the size of the tuple *p*, which must be non-``NULL`` and point to a tuple;
   no error checking is performed.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 57)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyTuple_GetItem(PyObject *p, Py_ssize_t pos)

   Return the object at position *pos* in the tuple pointed to by *p*.  If *pos* is
   negative or out of bounds, return ``NULL`` and set an :exc:`IndexError` exception.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 63)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyTuple_GET_ITEM(PyObject *p, Py_ssize_t pos)

   Like :c:func:`PyTuple_GetItem`, but does no checking of its arguments.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 68)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyTuple_GetSlice(PyObject *p, Py_ssize_t low, Py_ssize_t high)

   Return the slice of the tuple pointed to by *p* between *low* and *high*,
   or ``NULL`` on failure.  This is the equivalent of the Python expression
   ``p[low:high]``.  Indexing from the end of the list is not supported.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 75)

Unknown directive type "c:function".

```
.. c:function:: int PyTuple_SetItem(PyObject *p, Py_ssize_t pos, PyObject *o)

   Insert a reference to object *o* at position *pos* of the tuple pointed to by
   *p*.  Return ``0`` on success.  If *pos* is out of bounds, return ``-1``
   and set an :exc:`IndexError` exception.

   .. note::

      This function "steals" a reference to *o* and discards a reference to
      an item already in the tuple at the affected position.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 87)

Unknown directive type "c:function".

```
.. c:function:: void PyTuple_SET_ITEM(PyObject *p, Py_ssize_t pos, PyObject *o)

   Like :c:func:`PyTuple_SetItem`, but does no error checking, and should *only* be
   used to fill in brand new tuples.

   .. note::

      This macro "steals" a reference to *o*, and, unlike
      :c:func:`PyTuple_SetItem`, does *not* discard a reference to any item that
      is being replaced; any reference in the tuple at position *pos* will be
      leaked.
```

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

Unknown directive type "c:function".

```
.. c:function:: int _PyTuple_Resize(PyObject **p, Py_ssize_t newsize)

   Can be used to resize a tuple.  *newsize* will be the new length of the tuple.
   Because tuples are *supposed* to be immutable, this should only be used if there
   is only one reference to the object.  Do *not* use this if the tuple may already
   be known to some other part of the code.  The tuple will always grow or shrink
   at the end.  Think of this as destroying the old tuple and creating a new one,
   only more efficiently.  Returns ``0`` on success. Client code should never
   assume that the resulting value of ``*p`` will be the same as before calling
   this function. If the object referenced by ``*p`` is replaced, the original
   ``*p`` is destroyed.  On failure, returns ``-1`` and sets ``*p`` to ``NULL``, and
   raises :exc:`MemoryError` or :exc:`SystemError`.
```

Struct Sequence Objects

Struct sequence objects are the C equivalent of :func:`~collections.namedtuple` objects, i.e. a sequence whose items can also be accessed through attributes. To create a struct sequence, you first have to create a specific struct sequence type.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 117); *backlink*

Unknown interpreted text role "func".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 122)

Unknown directive type "c:function".

```
.. c:function:: PyTypeObject* PyStructSequence_NewType(PyStructSequence_Desc *desc)
```

```
   Create a new struct sequence type from the data in *desc*, described below. Instances
   of the resulting type can be created with :c:func:`PyStructSequence_New`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 128)

Unknown directive type "c:function".

```
.. c:function:: void PyStructSequence_InitType(PyTypeObject *type, PyStructSequence_Desc *desc)

   Initializes a struct sequence type *type* from *desc* in place.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 133)

Unknown directive type "c:function".

```
.. c:function:: int PyStructSequence_InitType2(PyTypeObject *type, PyStructSequence_Desc *desc)

   The same as ``PyStructSequence_InitType``, but returns ``0`` on success and ``-1`` on
   failure.

   .. versionadded:: 3.4
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 141)

Unknown directive type "c:type".

```
.. c:type:: PyStructSequence_Desc

   Contains the meta information of a struct sequence type to create.

   +------------------+-----------------------------+-------------------------------------+
   | Field            | C Type                      | Meaning                             |
   +==================+=============================+=====================================+
   | ``name``         | ``const char *``            | name of the struct sequence type    |
   +------------------+-----------------------------+-------------------------------------+
   | ``doc``          | ``const char *``            | pointer to docstring for the type   |
   |                  |                             | or ``NULL`` to omit                 |
   +------------------+-----------------------------+-------------------------------------+
   | ``fields``       | ``PyStructSequence_Field *`` | pointer to ``NULL``-terminated array |
   |                  |                             | with field names of the new type    |
   +------------------+-----------------------------+-------------------------------------+
   | ``n_in_sequence`` | ``int``                    | number of fields visible to the     |
   |                  |                             | Python side (if used as tuple)      |
   +------------------+-----------------------------+-------------------------------------+
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 161)

Unknown directive type "c:type".

```
.. c:type:: PyStructSequence_Field

   Describes a field of a struct sequence. As a struct sequence is modeled as a
   tuple, all fields are typed as :c:type:`PyObject*`.  The index in the
   :attr:`fields` array of the :c:type:`PyStructSequence_Desc` determines which
   field of the struct sequence is described.

   +-----------+------------------+-----------------------------------------+
   | Field     | C Type           | Meaning                                 |
   +===========+==================+=========================================+
   | ``name``  | ``const char *`` | name for the field or ``NULL`` to end   |
   |           |                  | the list of named fields, set to        |
   |           |                  | :c:data:`PyStructSequence_UnnamedField` |
   |           |                  | to leave unnamed                        |
   +-----------+------------------+-----------------------------------------+
```

```
   | ``doc``    | ``const char *`` | field docstring or ``NULL`` to omit     |
   +-----------+------------------+-----------------------------------------+
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 180)

Unknown directive type "c:var".

```
.. c:var:: const char * const PyStructSequence_UnnamedField

   Special value for a field name to leave it unnamed.

   .. versionchanged:: 3.9
      The type was changed from ``char *``.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 188)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyStructSequence_New(PyTypeObject *type)

   Creates an instance of *type*, which must have been created with
   :c:func:`PyStructSequence_NewType`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 194)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyStructSequence_GetItem(PyObject *p, Py_ssize_t pos)

   Return the object at position *pos* in the struct sequence pointed to by *p*.
   No bounds checking is performed.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 200)

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyStructSequence_GET_ITEM(PyObject *p, Py_ssize_t pos)

   Macro equivalent of :c:func:`PyStructSequence_GetItem`.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 205)

Unknown directive type "c:function".

```
.. c:function:: void PyStructSequence_SetItem(PyObject *p, Py_ssize_t pos, PyObject *o)

   Sets the field at index *pos* of the struct sequence *p* to value *o*.  Like
   :c:func:`PyTuple_SET_ITEM`, this should only be used to fill in brand new
   instances.

   .. note::

      This function "steals" a reference to *o*.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\(cpython-main)(Doc)(c-api)tuple.rst, line 216)

Unknown directive type "c:function".

```
.. c:function:: void PyStructSequence_SET_ITEM(PyObject *p, Py_ssize_t *pos, PyObject *o)

   Macro equivalent of :c:func:`PyStructSequence_SetItem`.

   .. note::

      This function "steals" a reference to *o*.
```