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ctypes

C DLL . 2.5

| С Туре | Python Type | ctypes Type |
|-----------------------------|----------------------------|--------------|
| bool | bool(1) | c_bool |
| char | 1-character string | c_char |
| wchar_t | 1-character Unicode string | c_wchar |
| char | int/long | c_byte |
| unsigned char | int/long | c_ubyte |
| short | int/long | c_short |
| unsigned short | int/long | c_ushort |
| int | int/long | c_int |
| size_t | int/long | c_size_t |
| unsigned int | int/long | c_uint |
| long | int/long | c_long |
| unsigned long | int/long | c_ulong |
| long long | int/long | c_longlong |
| unsigned long long | int/long | c_ulonglong |
| float | float | c_float |
| double | float | c_double |
| long double | float | c_longdouble |
| char * (NULL terminated) | string or none | c_char_p |
| wchar_t * (NULL terminated) | unicode or none | c_wchar_p |
| void * | int/long or none | c_void_p |

```
from ctypes import *

print c_ushort(-5)

seitz = c_char_p("loves the python")
print seitz
print seitz.value
```

```
c_ushort(65531)
c_char_p('loves the python')
loves the python
```

value

C

```
struct beer_recipe
{
    int amt_barley;
    int amt_water;
};
```

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```
class beer_recipe(Structure):
    _fields_ = [
            ("amt_barley", c_int),
            ("amt_water", c_int),
]
```

C

```
union {
   long barley_long;
   int barley_int;
```

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```
char barley_char[8];
}barley_amount;
```

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```
class barley_amount(Union):
    _fields_ = [
        ("barley_long", c_long),
        ("barley_int", c_int),
        ("barley_char", c_char * 8),
]
```

```
class test(Structure):
    _fields_ = [
          ("a", c_ushort),
          ("b", c_ushort)
]

s = POINTER(test)
s = s(test())

# s = POINTER(test)(test())

s.contents.a = 1
s.contents.b = 2
```

DLL

3가

cdll()

cdecl export

windll()

stdcall export

oledII()

windll() HRESULT COM export

msvcrt.dll printf

```
from ctypes import *
msvcrt = cdll.msvcrt
message_string = "Hello world!\n"
msvcrt.printf("Testing: %s", message_string)
```

• ctypes

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