

# What is this weird constructory syntax C::C()?

 [devblogs.microsoft.com/oldnewthing/20180607-00](https://devblogs.microsoft.com/oldnewthing/20180607-00)

June 7, 2018



Raymond Chen

The Microsoft Visual C++ compiler supports this weird thing:

```
// assume a class C has been defined
C* p = (C*)malloc(sizeof(C));
p->C::C(); // huh?
```

This weird syntax is how people in olden times explicitly invoked a constructor on an uninitialized block of memory.

Then placement new arrived on the scene and made the above syntax obsolete.

```
// new hotness
C* p = (C*)malloc(sizeof(C));
new(p) C();
```

But the Microsoft Visual C++ compiler still supports the old syntax for backward compatibility purposes.

Note that the corresponding explicit destructor syntax

```
p->C::~C(); // can be shortened to p->~C() if p is of type C*
```

is still standard as of this writing.

[Raymond Chen](#)

**Follow**

