## A quick note about WRL's ChainInterfaces template class

devblogs.microsoft.com/oldnewthing/20230501-00

May 1, 2023



The <u>Windows Runtime C++ Template Library</u> (commonly known as WRL) contains a template class called <u>ChainInterfaces</u>. The documentation for <u>ChainInterfaces</u> talks about what it does but doesn't tell you *why it's there* or when you should use it.

The purpose of ChainInterfaces is to be included among the template arguments to the WRL RuntimeClass and Implements template classes to indicate that you have a sequence ("chain") of interfaces where each one extends the previous one.

For example, the IFileSystemBindData2 interface extends the IFileSystemBindData interface. If you want to use WRL to implement an object that implements both interfaces, you would write

```
namespace wrl = Microsoft::WRL;
struct MyFileSystemBindData :
    wrl::RuntimeClass<
        wrl::RuntimeClassFlags<wrl::ClassicCom>,
        wrl::ChainInterfaces<IFileSystemBindData2, IFileSystemBindData>
        >
        {
        [ implementation elided for expository purposes ]]
}
```

Note that you list the ChainInterfaces template parameters from *most derived to least derived*. Fortunately, if you get the order wrong, you get a compile-time error.