

How do I access and customize the `IInspectable` methods of a Windows Runtime class written in C++/WinRT?

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The Windows Runtime `IInspectable` interface adds three methods beyond those of its base interface `IUnknown`: `GetRuntimeClassName`, `GetIids`, and `GetTrustLevel`. The C++/WinRT project does not expose these methods because they are used primarily by the language infrastructure, and putting them directly on C++/WinRT objects would cause them to clutter up Intellisense and autocomplete.

So how do you access these methods if they aren't present on `winrt::Windows::Foundation::IInspectable`?

You access them through separate free functions.

```
// returned as a winrt::hstring
auto name = winrt::get_class_name(something);

// returned as a winrt::com_array<winrt::guid>
auto interfaces = winrt::get_interfaces(something);

// returned as a winrt::Windows::Foundation::TrustLevel
auto level = winrt::get_trust_level(something);
```

Okay, so that's how you can call these secret methods. But how do you override the default implementations?

For `GetRuntimeClassName` and `GetTrustLevel` you just override it like any other overridable method:

```

struct Something :
    winrt::implements<Something,
        winrt::Windows::Foundation::IInspectable>
{
    winrt::hstring GetRuntimeClassName() const
    { return L"CustomSomething"; }

    auto GetTrustLevel() const
    { return winrt::Windows::Foundation::TrustLevel::BaseTrust; }
};

```

For `GetIids`, the list of interfaces is generated automatically from the list provided to `implements`. If you want to remove an interface from the list, you can “cloak” it:

```

winrt::implements<MyClass,
    Interface1, Interface2, winrt::cloaked<Interface3>>

```

This marks the third interface as cloaked, which means that it is not reported by `GetIids`.

Bonus chatter: What is the default implementation of these methods?

The default runtime class name is the name of the class (if it is a Windows Runtime class) or the default interface, as reported by `winrt::name_of`. The default trust level is `BaseTrust`,

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