Contents

You can easily extend the behavior of entities in your model using property interceptors. We'll show you how here.

- **Platform:** Silverlight, WPF
- **Language:** C#, VB
- **Download:** Property interceptors (Silverlight), Property interceptors (WPF)

Problem

You'll often want to customize your model with property interceptors to extend the behavior of your entities.

Solution

This simple application shows how to declare and work with property interceptors in a Silverlight application. In this sample the two primary ways of creating property interceptors are shown.

Attribute interception

In the **Customer.cs** file, you'll find several interception methods, all marked with a property interceptor attribute. We've only provided a few methods, but this should give you an idea of what you can do:

- UppercaseCountry – marked with AfterGet for the Country property. Note the method signature used here.
- AfterSetAnyProperty – marked with AfterSet for any property in the Customer class. We just provide simple logging here.
- BeforeSetCompanyName – marked with BeforeSet for the CompanyName property. This sample forces the incoming value to upper case.
- AfterSetCompanyName – marked with AfterSet for the CompanyName property. Provides simple logging.

Dynamic property interception

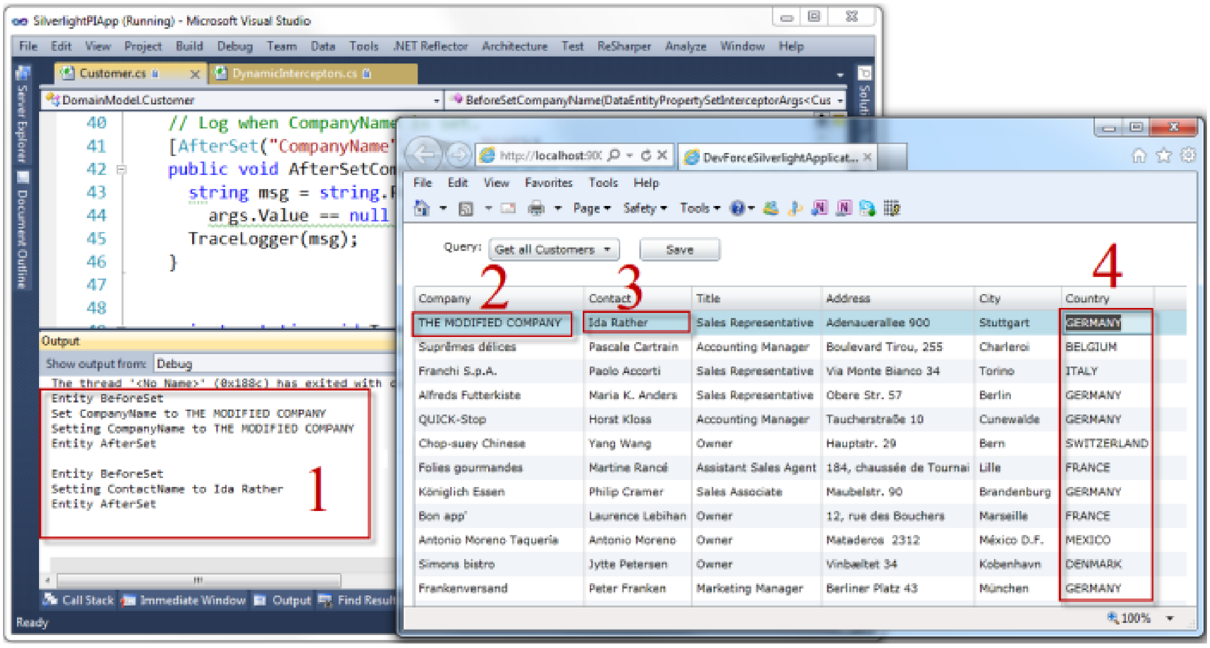
The **DynamicInterceptors.cs** file contains several examples showing how to dynamically add interceptors at run time. Interceptors can also be removed and temporarily skipped at run time too, but we don't show that here.

Two actions are added here, both on Entity. Interception actions on a type apply to that type and all sub-types. Here we provide simple logging on a *BeforeSet* and *AfterSet* for any property on any entity.

Unlike the attribute interceptors in the Customer type, which DevForce discovers automatically, we need to specifically add these dynamic interceptors at run time. The AddDynamicEntityInterceptors method is called in Page.xaml.cs when initializing persistence activities.

Run the app

When you run the application in the Visual Studio debugger (e.g., with F5), you see the results of the interceptors in action.


SilverlightPIApp (Running) - Microsoft Visual Studio
File Edit View Project Build Debug Team Data Tools .NET Reflector Architecture Test ReSharper Analyze Window Help
Customer.cs
DynamicInterceptors.cs
DomainModel.Customer
BeforeSetCompanyName(DataEntityPropertySetInterceptorArgs<Cus
Output
Show output from: Debug
Call Stack
Immediate Window
Output
Find Results
Ready
http://localhost:90
DevForceSilverlightApplicat...
File Edit View Favorites Tools Help
Page
Safety
Tools
Query: Get all Customers
Save
100%
1
2
3
4

```
// Log when CompanyName
[AfterSet("CompanyName"
public void AfterSetCom
  string msg = string.F
    args.Value == null
  TraceLogger(msg);
}
```

```
The thread '<No Name>' (0x188c) has exited with c
Entity BeforeSet
Set CompanyName to THE MODIFIED COMPANY
Setting CompanyName to THE MODIFIED COMPANY
Entity AfterSet

Entity BeforeSet
Setting ContactName to Ida Rather
Entity AfterSet
```

Company	Contact	Title	Address	City	Country
THE MODIFIED COMPANY	Ida Rather	Sales Representative	Adenauerallee 900	Stuttgart	GERMANY
Suprêmes délices	Pascale Cartrain	Accounting Manager	Boulevard Tirou, 255	Charleroi	BELGIUM
Franchi S.p.A.	Paolo Accorti	Sales Representative	Via Monte Bianco 34	Torino	ITALY
Alfreds Futterkiste	Maria K. Anders	Sales Representative	Obere Str. 57	Berlin	GERMANY
QUICK-Stop	Horst Kloss	Accounting Manager	Taucherstraße 10	Cunewalde	GERMANY
Chop-suey Chinese	Yang Wang	Owner	Hauptstr. 29	Bern	SWITZERLAND
Folies gourmandes	Martine Rancé	Assistant Sales Agent	184, chaussée de Tournai	Lille	FRANCE
Königlich Essen	Philip Cramer	Sales Associate	Maubelstr. 90	Brandenburg	GERMANY
Bon app'	Laurence Lebihan	Owner	12, rue des Bouchers	Marseille	FRANCE
Antonio Moreno Taquería	Antonio Moreno	Owner	Mataderos 2312	México D.F.	MEXICO
Simons bistro	Jytte Petersen	Owner	Vinbæltet 34	Kobenhavn	DENMARK
Frankenversand	Peter Franken	Marketing Manager	Berliner Platz 43	München	GERMANY

1. The Visual Studio Output Window displays messages written by the interceptors in both *Customer.cs* and in *DynamicInterceptors.cs*
2. When the user changed the company name to "The Modified Company", the CompanyName "set" interceptor in *Customer.cs* converted that value to upper case.
3. The user changed the Contact to "Ida Rather". There are no interceptors for that property specifically but the *Entity* level property interceptor in *DynamicInterceptors.cs* logged the change to the Output window (1).
4. All "Country" values are displayed in upper case because of the Country "get" interceptor in *Customer.cs*