EXERCISES*

Track: **Developers**
Tutorial: **Advanced .NET API**
Speaker: Ewout Kramer

The speaker will be in the hands-on area to answer your questions!

During the hands-on session of the Advanced .NET API tutorial we will explore working with the .NET Profile validator in the API. As discussed during the tutorial, the .NET profile validator builds on the principal interfaces `IResourceResolver` and `ITerminologyService`. The following exercises are progressive, and each step builds on the previous steps, so you should try them out in sequence:

1. Build your own custom implementation of `IResourceResolver`
2. Create a new `ITerminologyService` implementation
3. Use both new implementations to run the .NET profile validator

1. Build your own IResourceResolver
An IResourceResolver resolves a given canonical url (a string) to an actual conformance Resource (StructureDefinition, ValueSet, etcetera). The .NET API has several useful implementations, one of which is the `ZipSource` which resolves canonical urls for types and resources that are part of the core FHIR specification.

- Try to use the `ZipSource` with the specification.zip to get some core resource definitions (i.e. try to resolve http://hl7.org/fhir/StructureDefinition/Patient)
- Now create an implementation of `IResourceResolver` that contains a `List<ValueSet>,` so it will resolve a list of in-memory ValueSets.

2. Create a new ITerminologyService implementation

- Use the new `IResourceResolver` you wrote in the previous exercise to resolve a `ValueSet`. Then use the `ValuesetExpander` to expand it.
- Use ValueSet's `FindInExpansion`() to verify whether you succeeded.
- Look at the `LocalTerminologyService`. Could you make an implementation of ITerminologyService that calls the `FhirClient.ValidateCode`() instead, so it will use an external terminology service?

Have fun, and remember to ask for help if you get stuck !

*This exercise will not be evaluated an no prizes are attached to any result. The exercise can only be used at HL7 FHIR DevDays 2017.