# More complex constraints

This exercise aims to allow you to familiarize yourself with creating more complex constraints on your FHIR profile.

In this exercise, you will use FSH.

## Exercises

1.  In order to distinguish between two items in the same list, you will need to use slicing.
    -   Create slicing rules for the identifier element in the Patient profile. Choose the value of the system field as the slice discriminator.
    -   Add two slices – one for the national identifier, one for the hospital identifier – and give them a name.
    -   Per slice, assign a (different) value for the 'system' on the slice. One of them could for example be "http://national.registry.org/ids".
    -   Within the slices, make the 'system' and 'value' elements mandatory.

2.  Combining profiles
    -   Create a profile on Observation, or use the profile if you have created one for the second model.
    -   Have the subject field use a reference to your Patient profile, by using the 'only' keyword and set the target of the reference to your Patient's profile url or name.

3.  Combining profiles using a profiled datatype
    -   Create a profile on HumanName.
    -   Add the name constraints to the HumanName the same way that you had previously done in the Patient profile.
    -   Go to your Patient profile, and set the name field to use your own HumanName instead of the core specification with the 'only' keyword

    This is an alternative way of profiling the name, with the advantage that you can reuse the profiled HumanName across other resources that use HumanName, like Practitioner, etc.