

# Homework

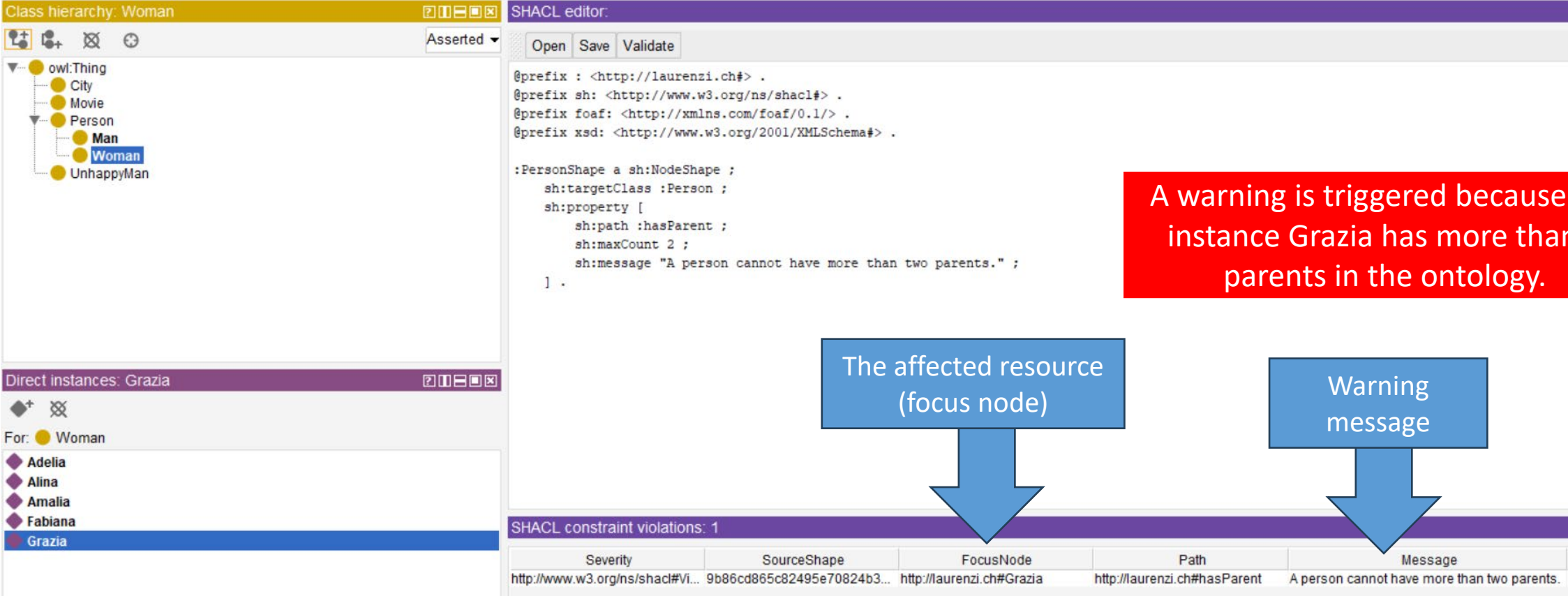
- Create a SHACL shape for your ontology and test it over Protégé.
- In class we created a SWRL to infer values for the new relation “hasParent”. In this solution we use this property to check whether a person has more than 2 (biological) parents. If that is the case, the below SHACL Shape triggers a warning message.

@prefix : <http://laurenzi.ch#> .

@prefix sh: <http://www.w3.org/ns/shacl#> .

```
:PersonShape a sh:NodeShape ;
  sh:targetClass :Person ;
  sh:property [
    sh:path :hasParent ;
    sh:maxCount 2 ;
    sh:message "A person cannot have more than two parents." ;
  ]
```

# SHACL Shape executed in the SHACL Editor of Protégé



**Class hierarchy: Woman**

- owl:Thing
  - City
  - Movie
  - Person
    - Man
    - Woman
  - UnhappyMan

**SHACL editor:**

```

@prefix : <http://laurenzi.ch#> .
@prefix sh: <http://www.w3.org/ns/shacl#> .
@prefix foaf: <http://xmlns.com/foaf/0.1/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

:PersonShape a sh:NodeShape ;
  sh:targetClass :Person ;
  sh:property [
    sh:path :hasParent ;
    sh:maxCount 2 ;
    sh:message "A person cannot have more than two parents." ;
  ] .
    
```

**Direct instances: Grazia**

For: Woman

- Adelia
- Alina
- Amalia
- Fabiana
- Grazia

**SHACL constraint violations: 1**

Severity	SourceShape	FocusNode	Path	Message
	http://www.w3.org/ns/shacl#Vi... 9b86cd865c82495e70824b3...	http://laurenzi.ch#Grazia	http://laurenzi.ch#hasParent	A person cannot have more than two parents.

A warning is triggered because the instance Grazia has more than 2 parents in the ontology.

The affected resource (focus node)

Warning message