

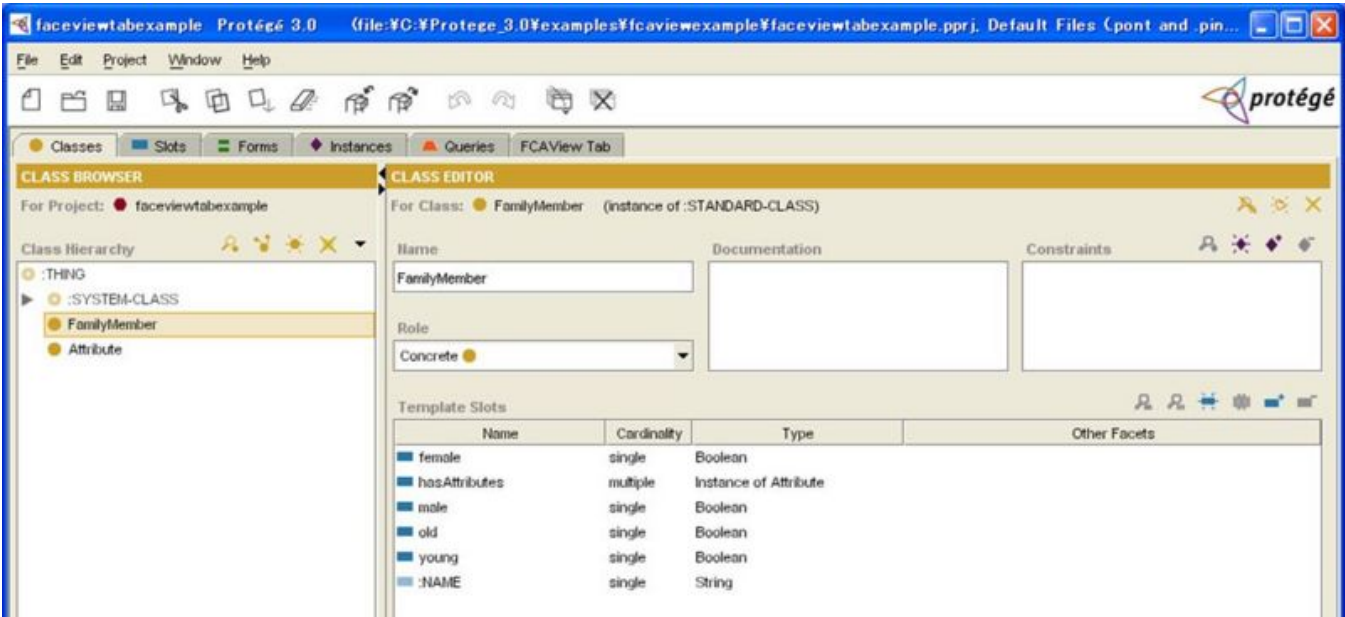
FCAView Protege Tab Plugin Manual

FCAView Protégé Tab Plugin Manual

 This manual explains how to use the FCAView Tab plug-in for Core Protégé Ontology.

The FCAView Tab plug-in provides Protégé-2000 users a novel way to visualize their ontologies using the formal concept analysis (FCA) technique. First of all, please make sure that you are using the Protégé-3.0 version. We assume that you are familiar with how to configure a tab plug-in in Protégé platform.

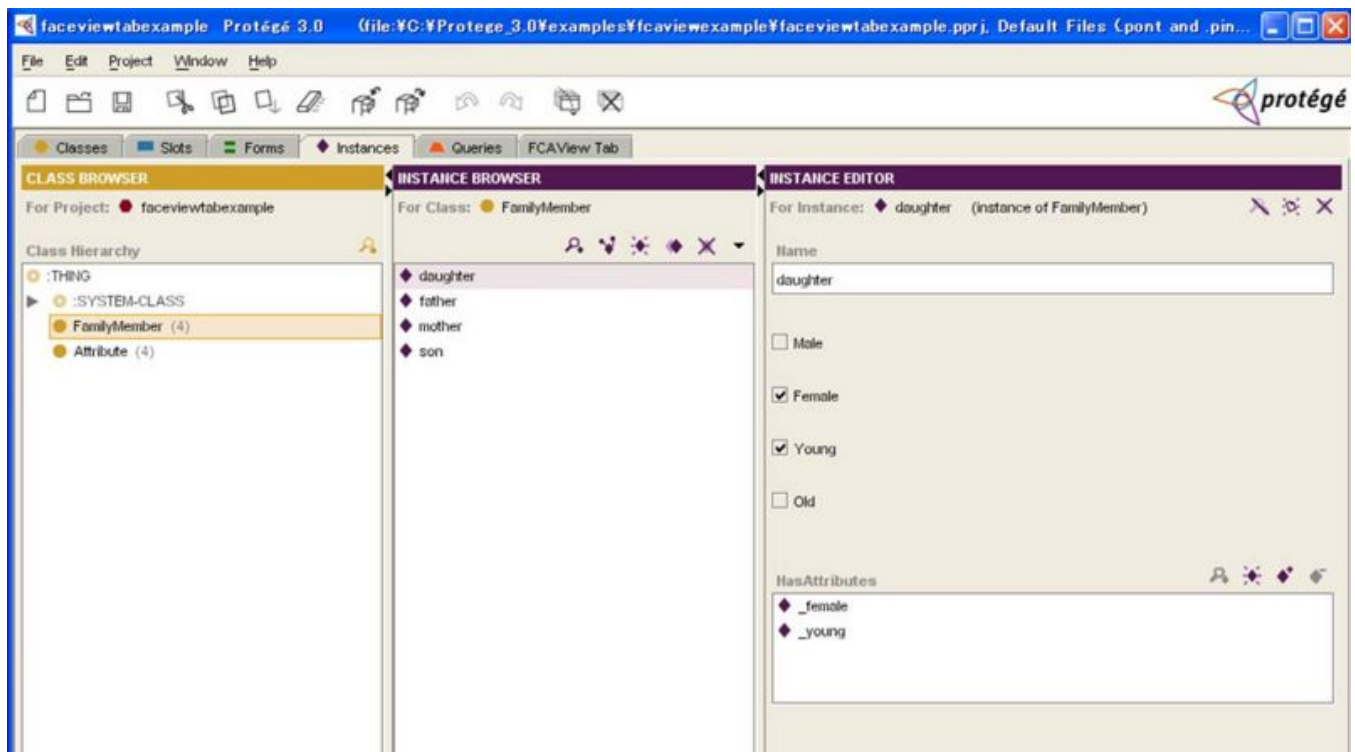
We use an example project that is downloadable to explain how to use the FCAView Tab plug-in. After opening the example project, you would see the following.



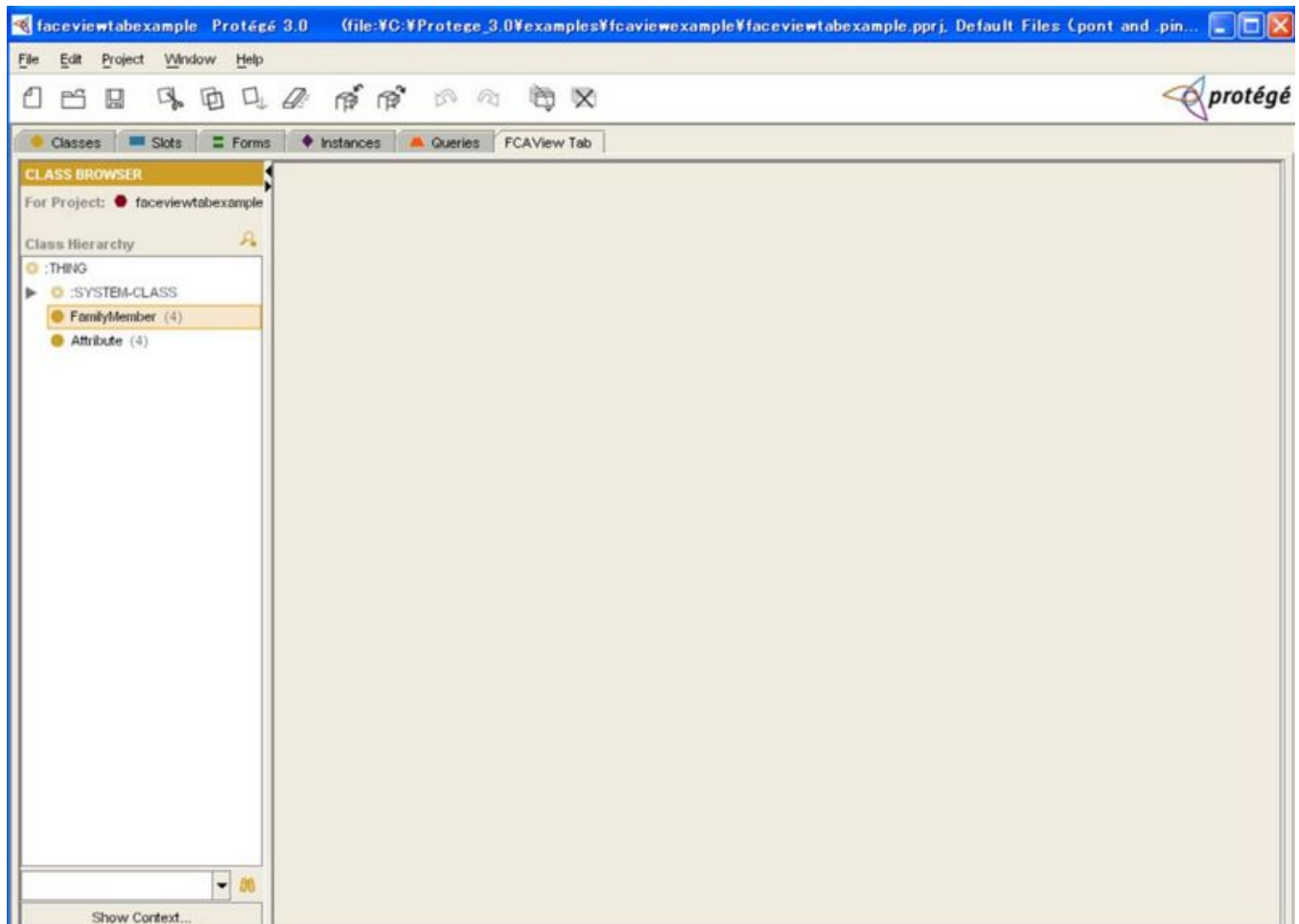
We assume that the instances (i.e. the formal objects) of a class in Protégé-2000, together with its own slots (i.e. the formal attributes), could form a formal context that would interest the users. In particular, two kinds of formal context can be formed:

1. the instances of a class with its slots in Boolean type. Here, the instances of the class FamilyMember with its Boolean type of slots: male, female, old, and young.
2. the instances of a class with it slots in Multiple Instance type. Here, the instances of the class FamilyMember with the instances of a Multiple Instance type of slot hasAttributes.

The following figure shows the instances of the class FamilyMember: father, mother, daughter and son.

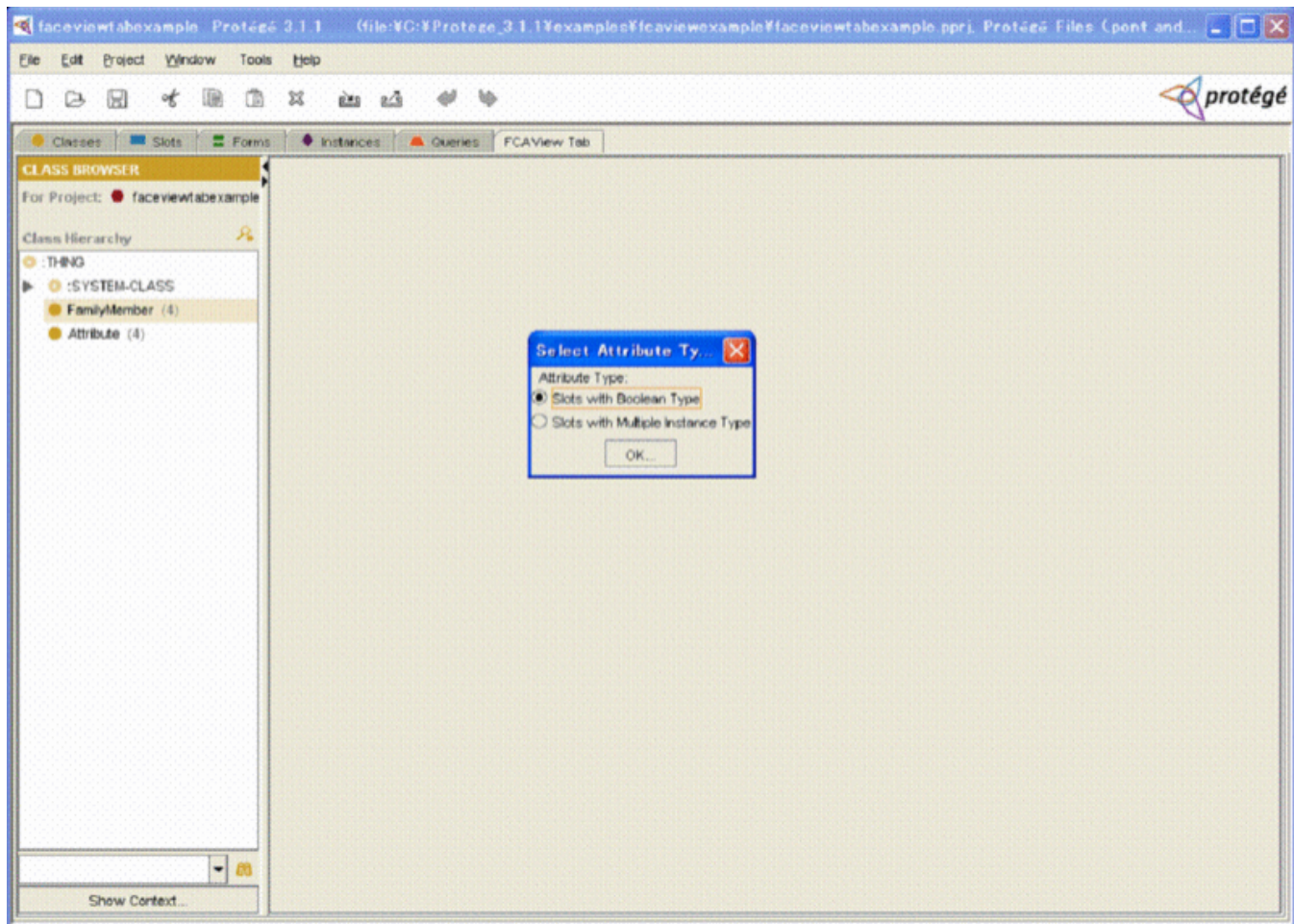


Clicking the FCAView Tab, you would see the following.



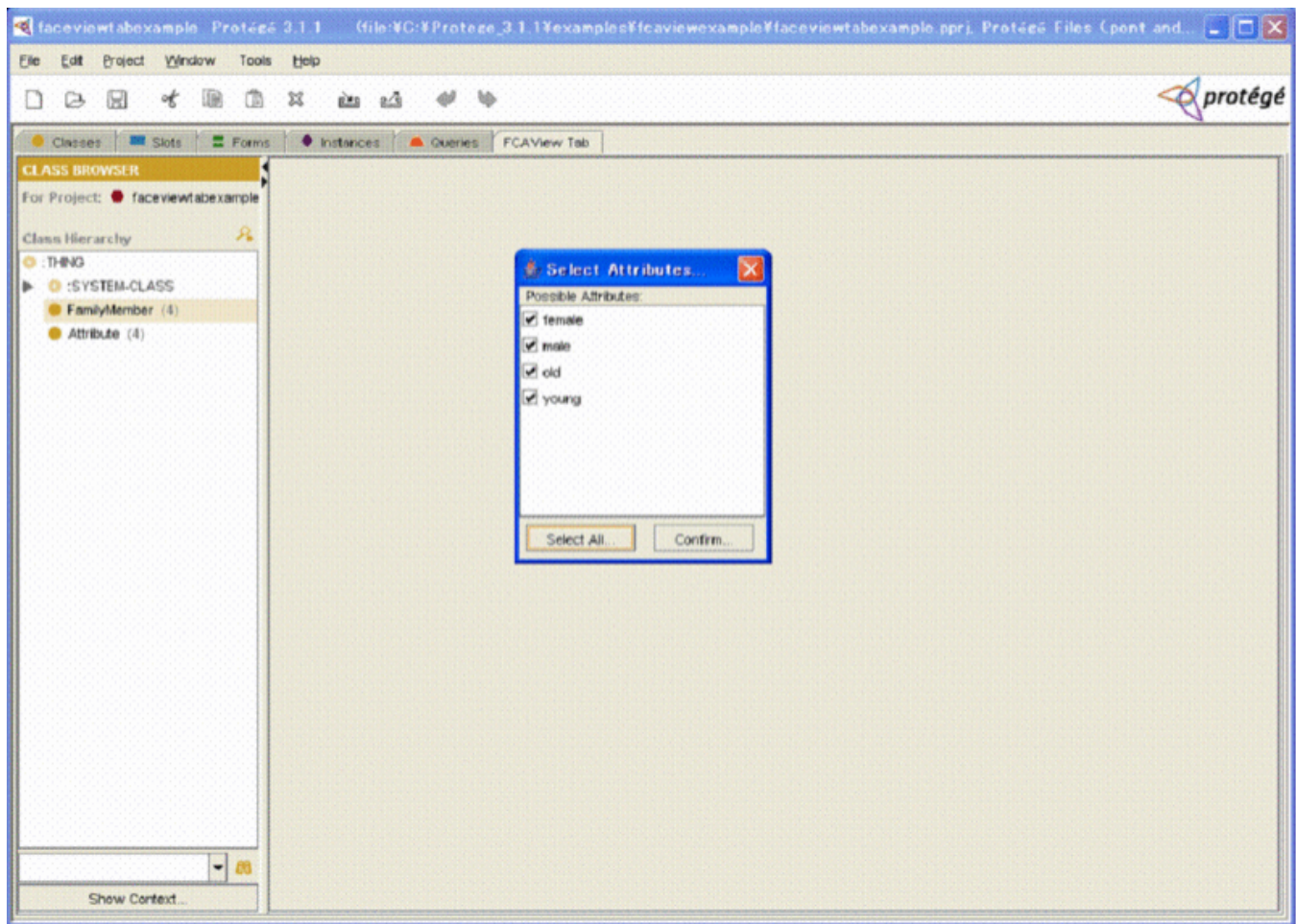
At first, you have to select a class (here, e.g. FamilyMember) in a class browser in left panel. And then you click the button Show Context at the bottom of left panel.

Then you would see a dialog panel as follows.

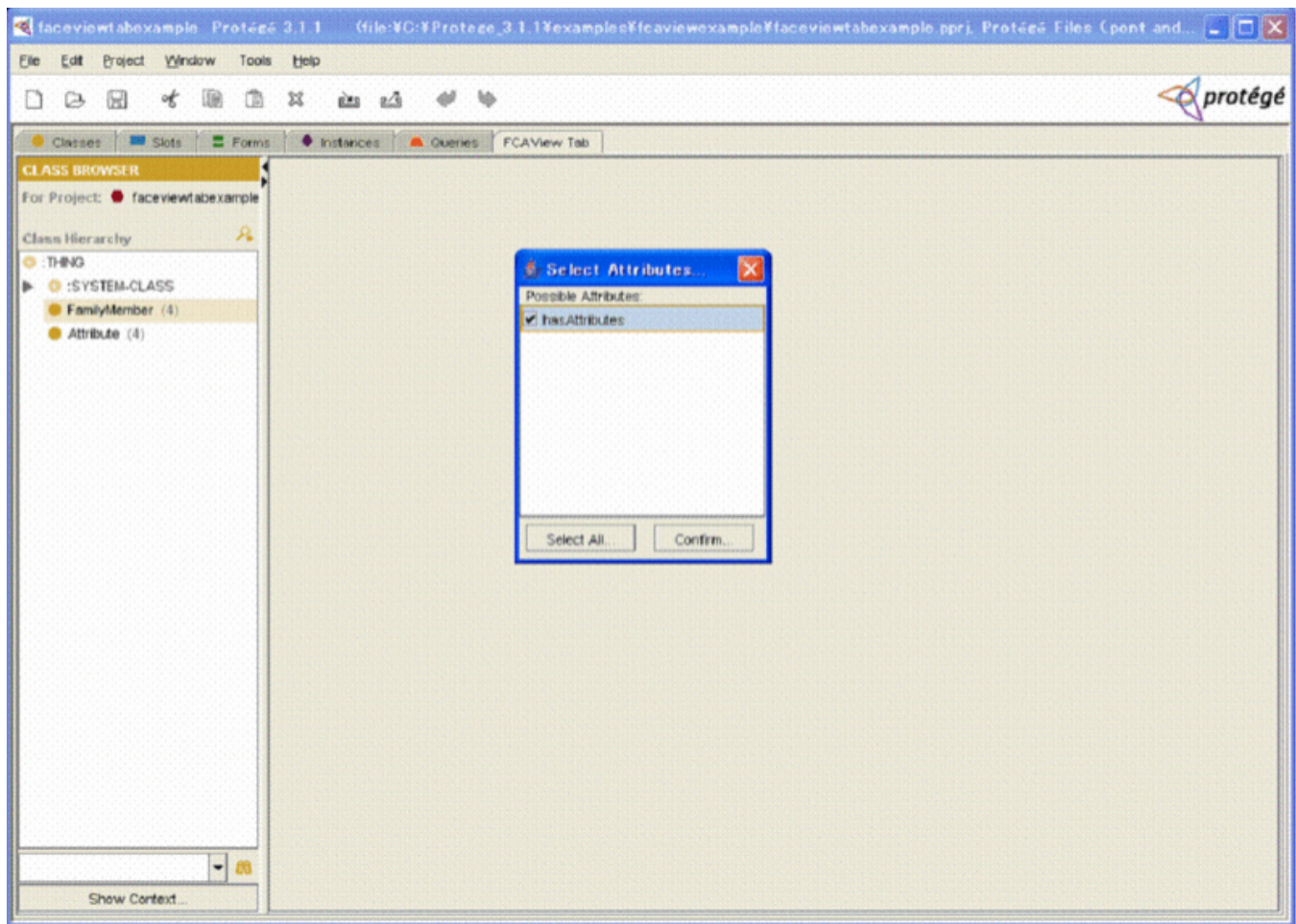


In this dialog panel, you have two selections for attributes type. One is for the Slots with Boolean Type, and one is the Slots with Multiple Instance Type.

By selecting the first one and clicking button OK, you would see another dialog panel as follows. You could select the attributes indicating the name of slots with Boolean type in this dialog panel.



By selecting the second one and clicking button OK, you would see another dialog panel as follows. You could select the attributes indicating the name of slots with Multiple Instance type in this dialog panel.



After making the selection and clicking the button Confirm, you would see that a formal context is formed as a cross table as follows.

faceviewtabexample Protégé 3.0 (file:¥C:¥Protege_3.0¥examples¥fcaviewexample¥faceviewtabexample.pprj, Default Files (pont and .pin...)

File Edit Project Window Help

Classes Slots Forms Instances Queries FCAView Tab

CLASS BROWSER

For Project: faceviewtabexample

Class Hierarchy

- THING
 - SYSTEM-CLASS
 - FamilyMember (4)
 - Attribute (4)

Parameter Value

Show arrow relation don't show

Compressed ☐

Object count 4

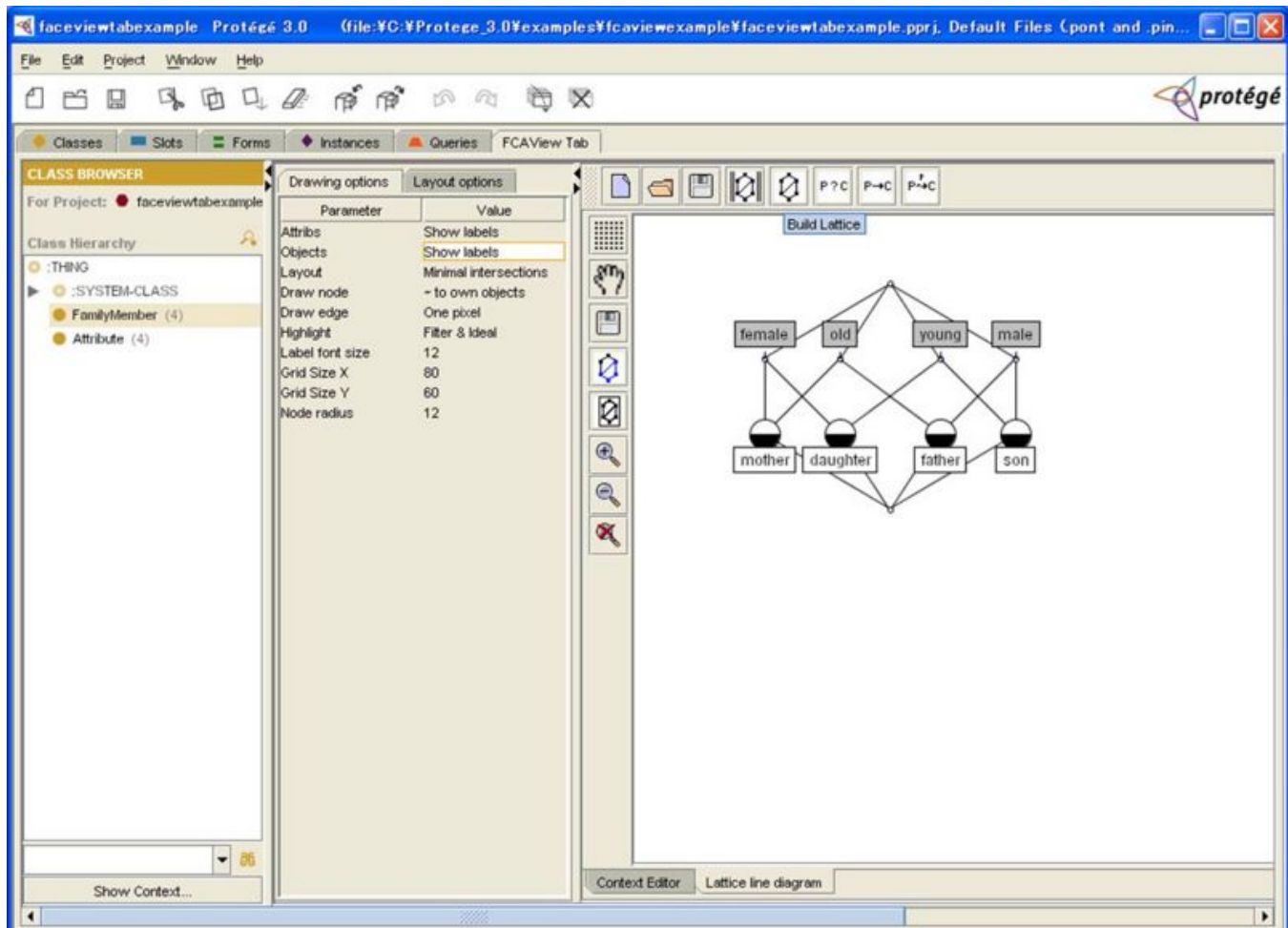
Attribute count 4

Context Editor

	A	B	C	D	E
		female	male	old	young
daughter		X			X
father		X	X	X	
mother		X			
son			X		X

Show Context...

By clicking the fifth button above the cross table (Build Lattice), you would see a lattice diagram of the formal context as follows.



In the current step, we think we only developed a basic model for two common cases. Several advanced models have been proposed and are under active development.

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