# Working with superclass intersection

This section will demonstrate the different menu options that appear in the cases of relationships between Superclass Intersections and other class elements.
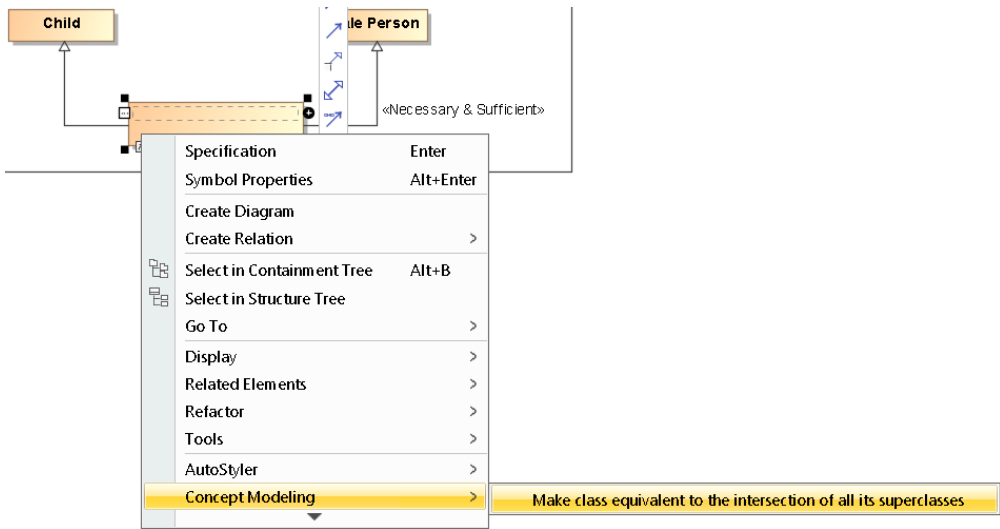
> ⓘ **Stereotypes**
>
> Please note that stereotype of the **selected Class** is *Superclass Intersection* and the stereotype of the **selected Generalization** is *Necessary and Sufficient.*

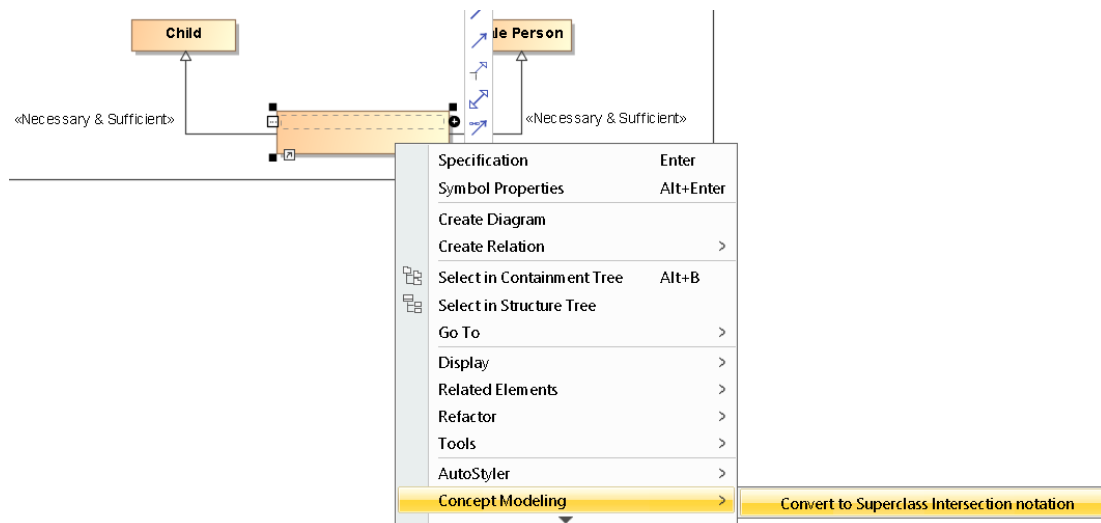The following cases are based on a **selected Class.**

Case 1: Selected class has no stereotype, and all outgoing generalizations have no stereotypes.
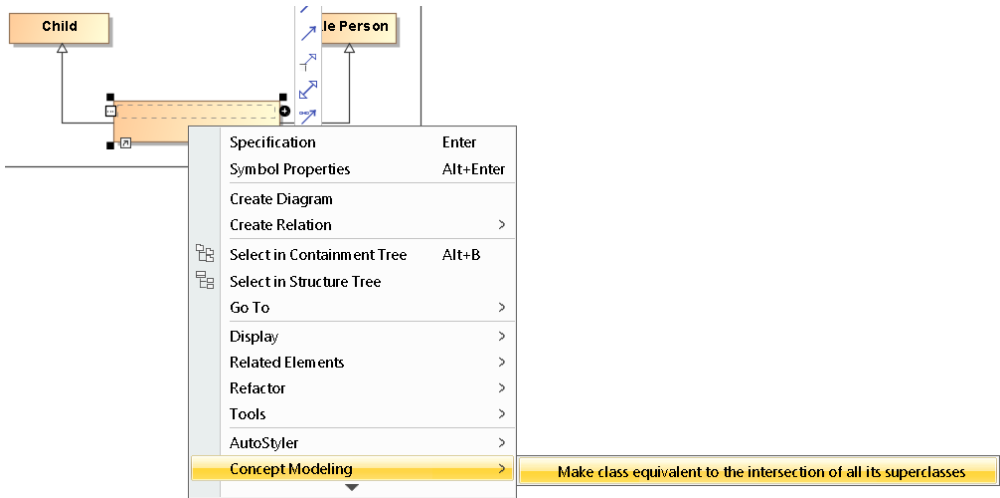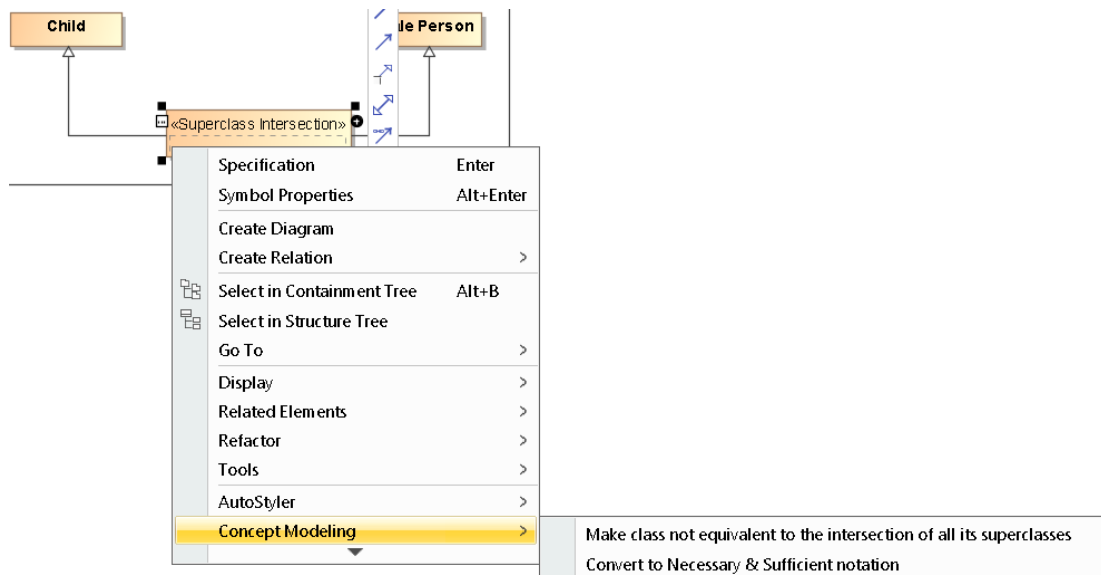

Case 2: Selected class has no stereotype, and some outgoing generalizations have stereotypes
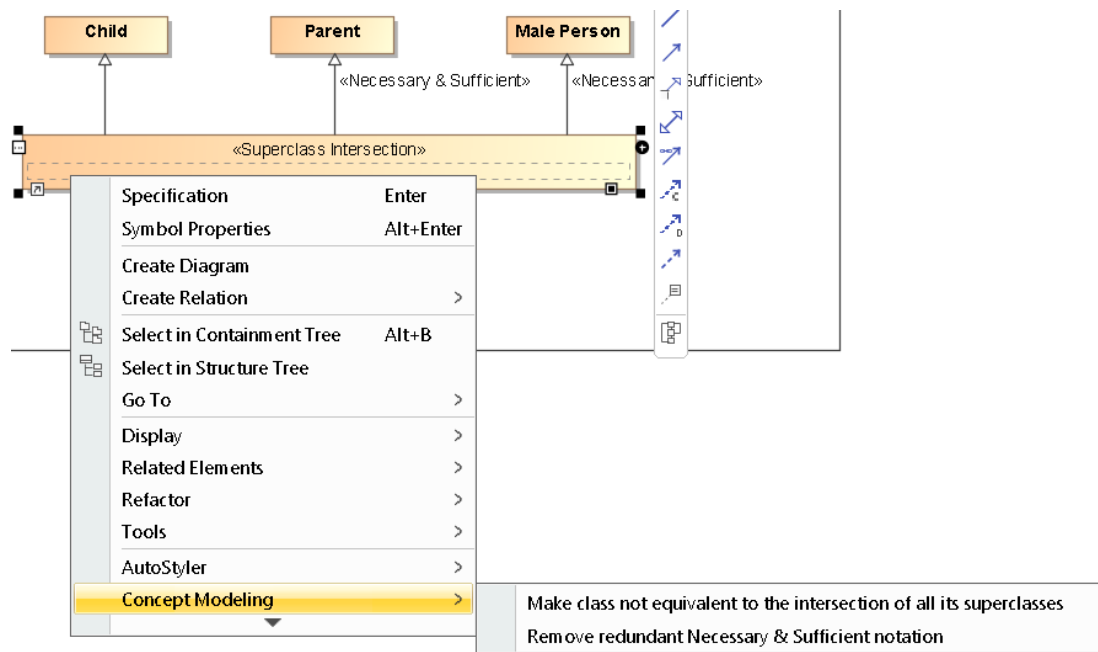

Case 3: Selected class has no stereotype, all outgoing generalizations have stereotypes.

Case 4: Selected class has a stereotype, but the generalizations do not.

Case 5: Selected class has a stereotype and some outgoing generalizations also have a stereotype.

Case 6: Selected class has a stereotype and all outgoing generalizations also have a stereotype.
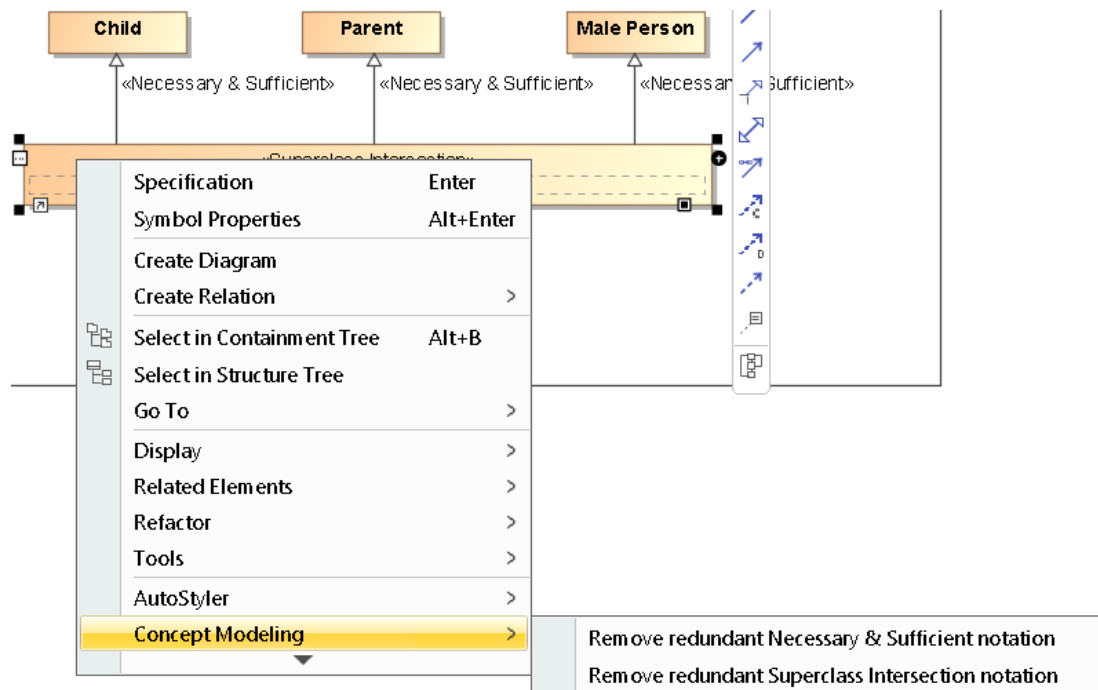
The following cases are based on the **selected Generalization** of specific class.

Case 1: Specific class of selected generalization has no stereotype, selected generalization has no stereotype, and all outgoing generalizations of specific class have no stereotype.
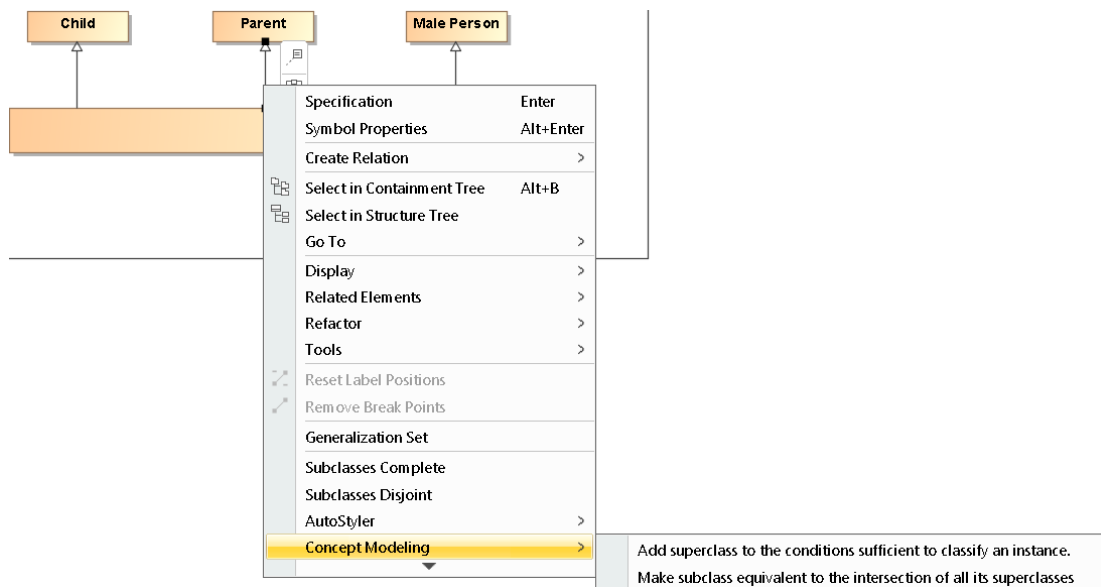
Case 2: Specific class of selected generalization has no stereotype, selected generalization has no stereotype, but some other outgoing generalizations of specific class have stereotype.

Case 3: Specific class of selected generalization has no stereotype, selected generalization has no stereotype, and all outgoing generalizations of specific class have stereotype, but some other outgoing generalizations of specific class have stereotype.

Child   Parent   Male Person

«Necessary & Sufficient»   «Necessary & Sufficient»

Specification	Enter
Symbol Properties	Alt+Enter
Create Relation	>
Select in Containment Tree	Alt+B
Select in Structure Tree	
Go To	>
Display	>
Related Elements	>
Refactor	>
Tools	>
Reset Label Positions	
Remove Break Points	
Generalization Set	
Subclasses Complete	
Subclasses Disjoint	
AutoStyler	>
Concept Modeling	>

Add superclass to the conditions sufficient to classify an instance.
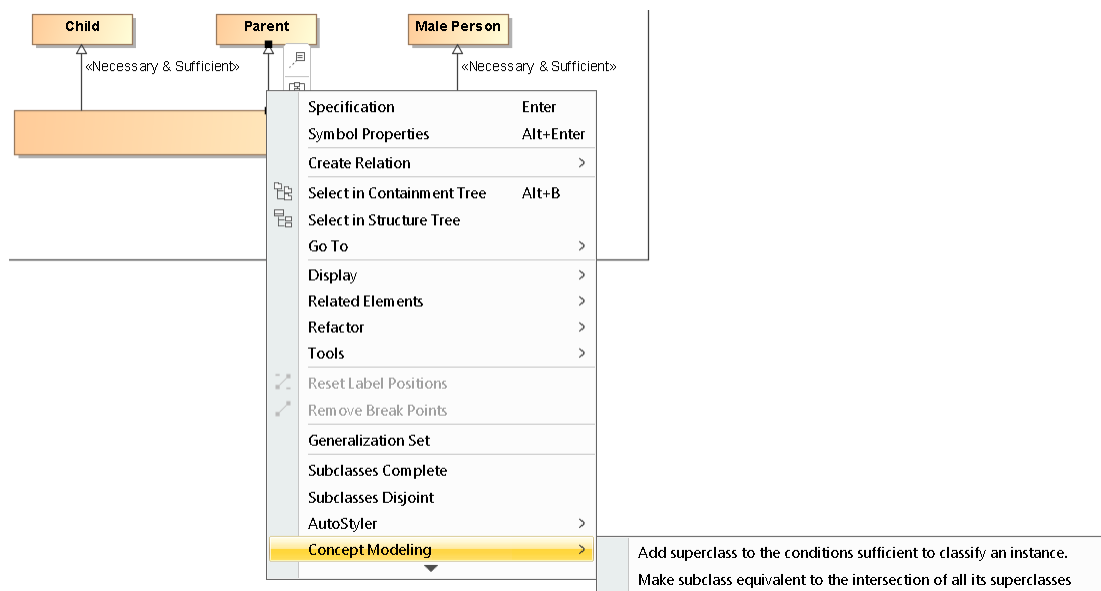Make subclass equivalent to the intersection of all its superclasses

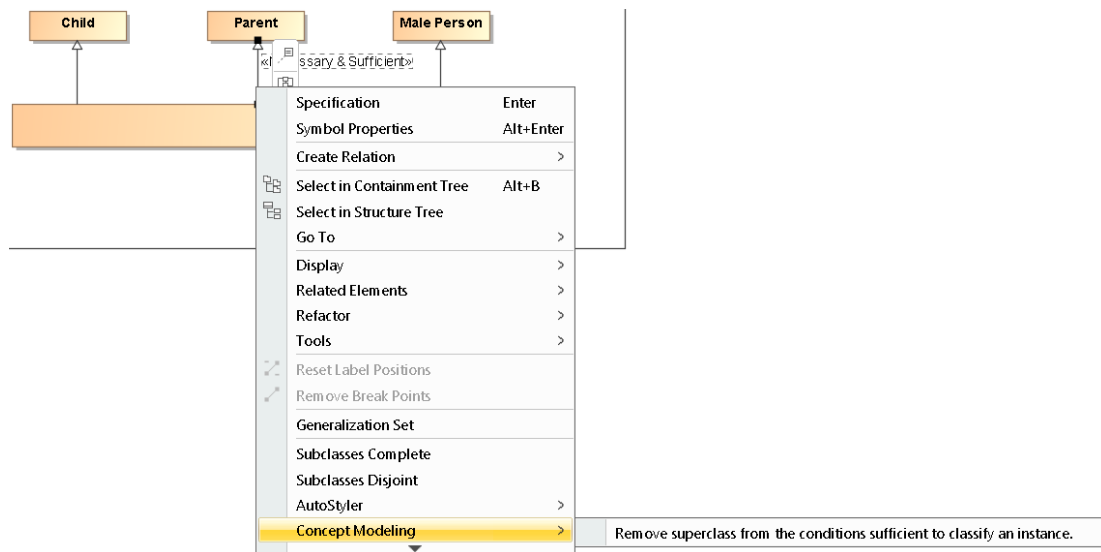Case 4: Specific class of selected generalization has no stereotype, selected generalization has stereotype, and all outgoing generalizations of specific class have no stereotype, but some other outgoing generalizations of specific class have no stereotype.

Child   Parent   Male Person

«f   ssary & Sufficient»

Specification	Enter
Symbol Properties	Alt+Enter
Create Relation	>
Select in Containment Tree	Alt+B
Select in Structure Tree	
Go To	>
Display	>
Related Elements	>
Refactor	>
Tools	>
Reset Label Positions	
Remove Break Points	
Generalization Set	
Subclasses Complete	
Subclasses Disjoint	
AutoStyler	>
Concept Modeling	>

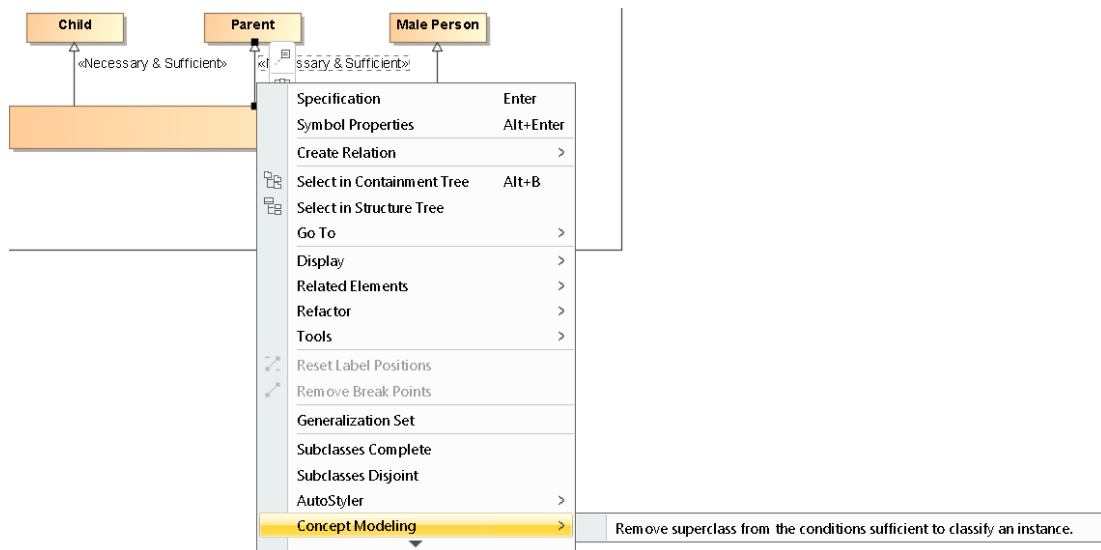Remove superclass from the conditions sufficient to classify an instance.

Case 5: Specific class of selected generalization has no stereotype, selected generalization has stereotype, and all outgoing generalizations of specific class have no stereotype, but some other outgoing generalizations of specific class have stereotype.

Case 6: Specific class of selected generalization has no stereotype, selected generalization has stereotype, and all outgoing generalizations of specific class have stereotype, but some other outgoing generalizations of specific class have stereotype.
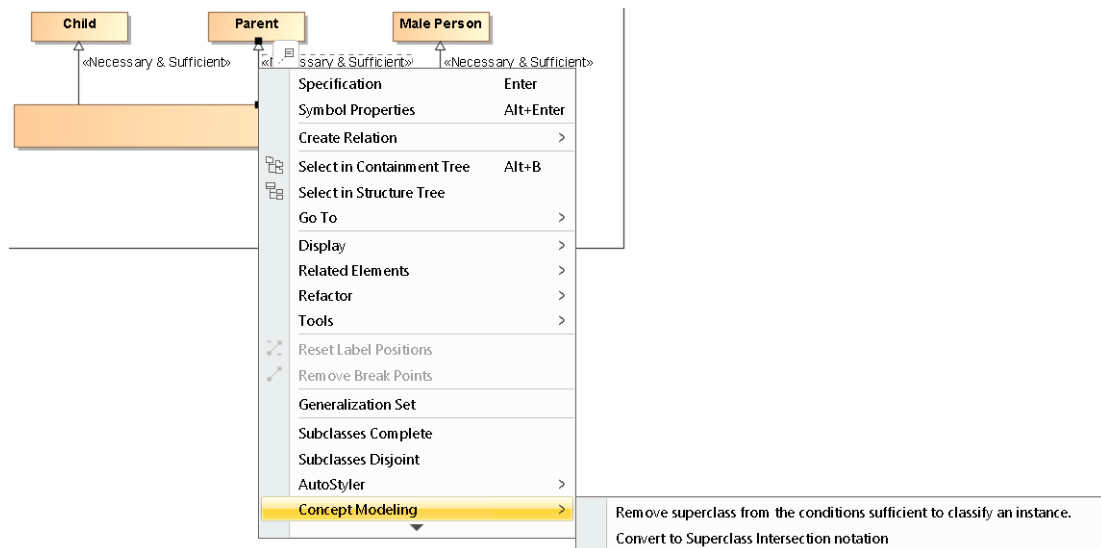

Case 7: Specific class of selected generalization has stereotype, selected generalization has no stereotype, and all outgoing generalizations of specific class have no stereotype, and some other outgoing generalizations of specific class have no stereotype.
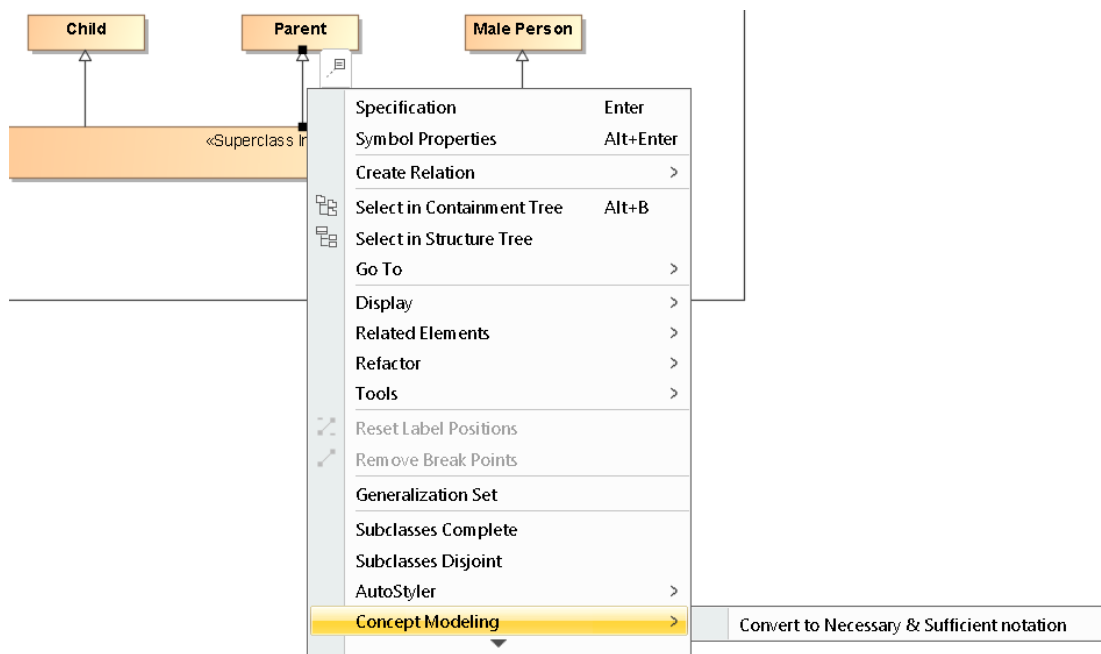
Child | **Parent** | **Male Person**

«Superclass I...

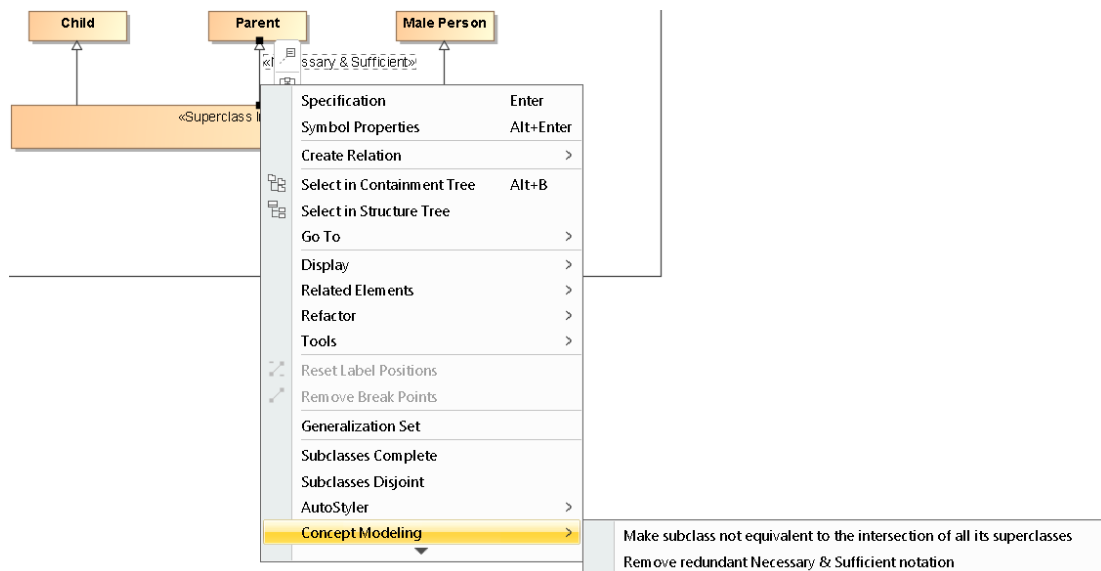| Specification | Enter |
Symbol Properties	Alt+Enter
Create Relation	>
Select in Containment Tree	Alt+B
Select in Structure Tree	
Go To	>
Display	>
Related Elements	>
Refactor	>
Tools	>
Reset Label Positions	
Remove Break Points	
Generalization Set	
Subclasses Complete	
Subclasses Disjoint	
AutoStyler	>
Concept Modeling	>

Convert to Necessary & Sufficient notation

Case 8: Specific class of selected generalization has stereotype, selected generalization has no stereotype, and all outgoing generalizations of specific class have no stereotype, and some other outgoing generalizations of specific class have stereotype.

Case 9: Specific class of selected generalization has stereotype, selected generalization has no stereotype, and all outgoing generalizations of specific class have stereotype, and some other outgoing generalizations of specific class have stereotype.

Case 10: Specific class of selected generalization has stereotype, selected generalization has stereotype, and all outgoing generalizations of specific class have no stereotype, and some other outgoing generalizations of specific class have no stereotype.
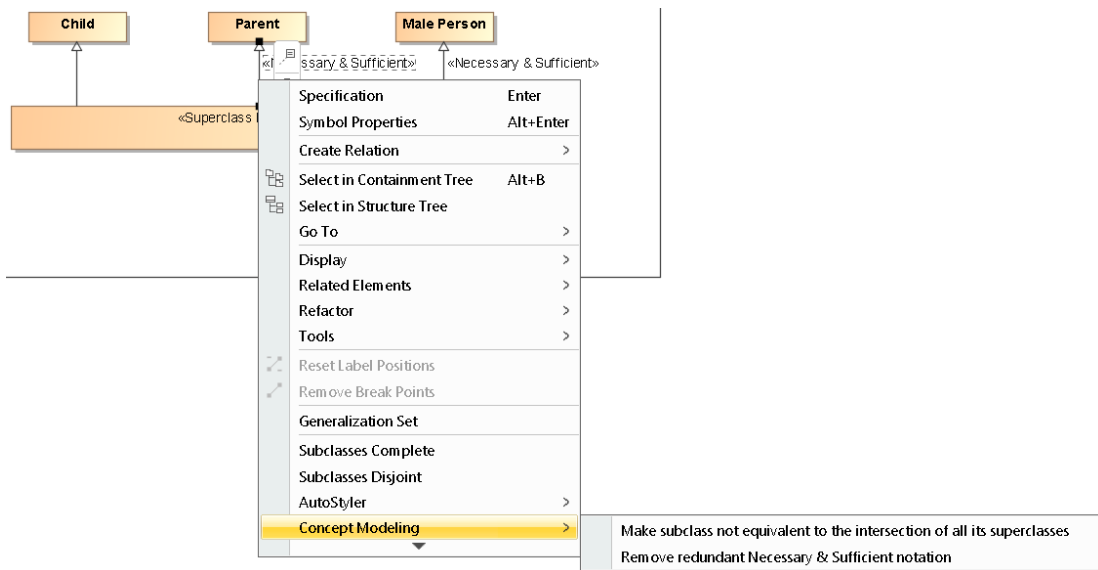

Child | **Parent** | **Male Person**

«...ssary & Sufficient»

«Superclass I...

Specification	Enter
Symbol Properties	Alt+Enter
Create Relation	>
Select in Containment Tree	Alt+B
Select in Structure Tree	
Go To	>
Display	>
Related Elements	>
Refactor	>
Tools	>
Reset Label Positions	
Remove Break Points	
Generalization Set	
Subclasses Complete	
Subclasses Disjoint	
AutoStyler	>
Concept Modeling	>

Make subclass not equivalent to the intersection of all its superclasses
Remove redundant Necessary & Sufficient notation

Case 11: Specific class of selected generalization has stereotype, selected generalization has stereotype, and all outgoing generalizations of specific class have no stereotype, and some other outgoing generalizations of specific class have stereotype.

Case 12: Specific class of selected generalization has stereotype, selected generalization has stereotype, and all outgoing generalizations of specific class have stereotype, and some other outgoing generalizations of specific class have stereotype.