

Course challenge exercise: Create a 3D clash detection family

All furniture and casework families with opening doors and drawers require a 3D clash detection solid within each family to allow clash avoidance and management in Autodesk Navisworks Manage. The solid should only be visible in the 3D view and have an option to control the visibility of the 3D clash detection family in each view with the use of a view template. The 3D clash detection family should be translucent and colored red.

Complete the required activities:

- Open the supplied family, **Office Cupboard.rfa**.
- Add a 3D clash detection capability to an office cupboard.
- Create parameters to control the opening width and height.
- Control the visibility of the solid so it only appears in a 3D view.
- Think carefully about your chosen solution!

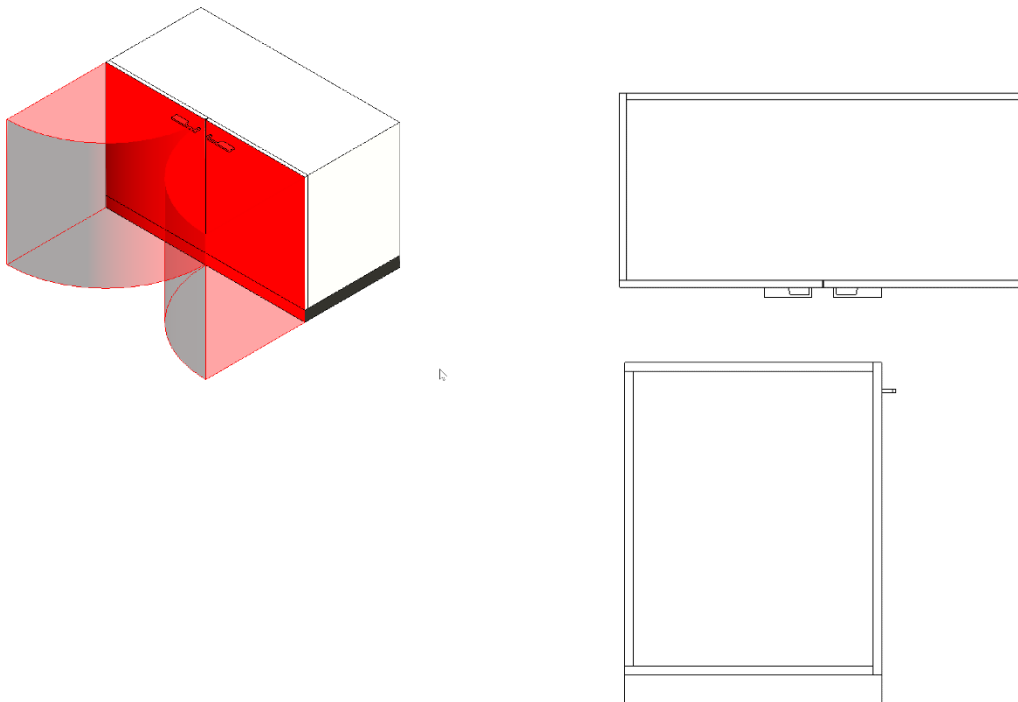


Figure 1. Target model

Assessment Criteria

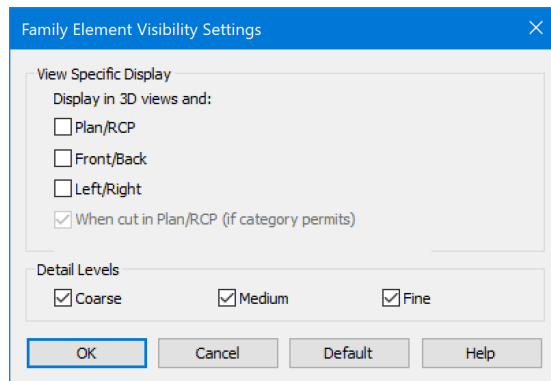
The finished exercise is available for comparison in the file ***Clash Detection_Complete.rfa***.

Accuracy – 50% (-5% for each incorrect type)

- The clash detection solid has been modeled accurately
- If the cupboard width and height change, the clash detection solid resizes.
- A red, translucent material has been applied.

Technique – 50% (-5% for each incorrect type)

- A separate family for the clash detection has been created and nested into the cupboard family. This will be required for efficiency and reuse in other furniture families.
- The correct visibility settings have been applied to the clash detection family



- A suitable Object Style has been created and used for the clash detection family.

