

Computer Aided Design – Module 2

Lesson ? – Doll's Chair



Lesson 1 – Doll’s Chair

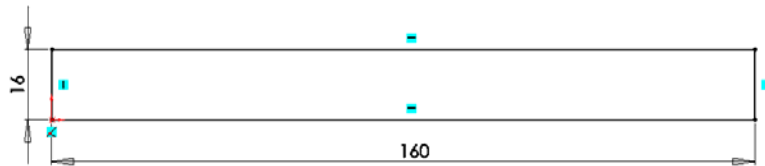
Commands used: Sketch Rectangle, Circle, Add Relations, Trim, Smart dimension, Extrude Boss/Base, Extruded Cut, Fillet & Edit Material

Approach to Lesson:

Create sketch for seat Create the sketch on the **Right Plane** using the Rectangle sketch command.



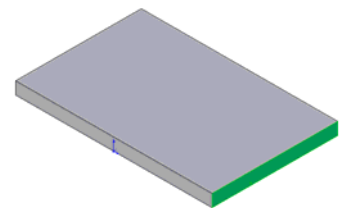
Smart Dimension Fully define the sketch using the given dimensions and confirm sketch.



Extruded Boss/Base Extrude the sketch using **Extruded Boss/Base**
Select **Mid-Plane** the end condition and a distance of 250mm.

Rename the feature as ‘Seat.’

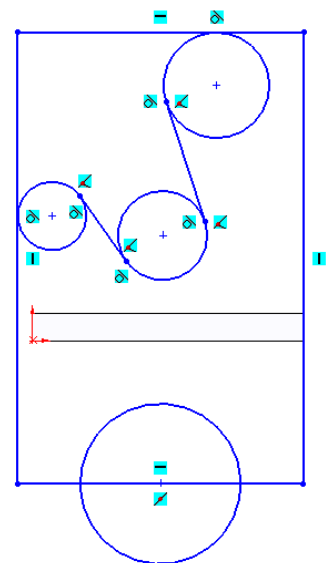
Create sketch for side Select the end face of the seat of the as the plane for this sketch



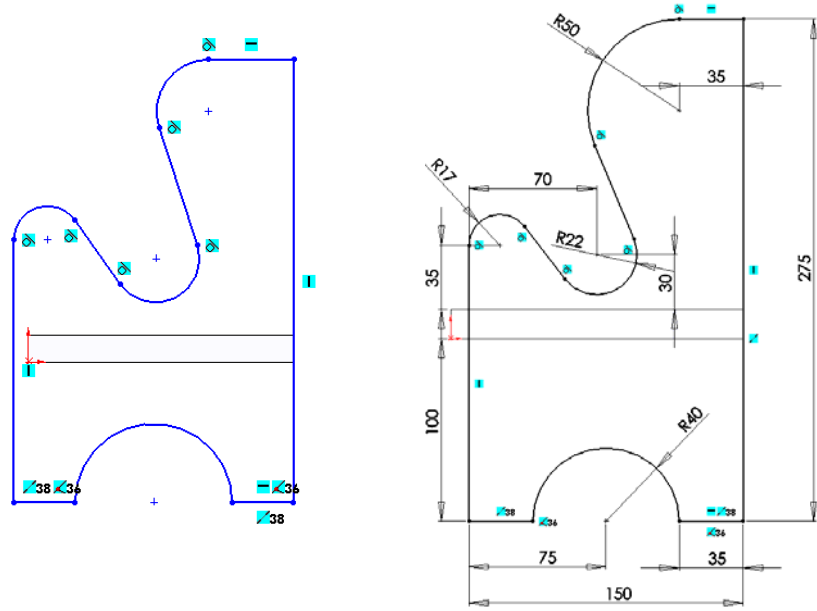
Sketch rectangle, circles and lines as shown.

(Alternatively you can draw the outline of the side using the line command).

Add the appropriate relations as indicated



Use the **Trim Entities** command to remove lines and arcs. Use **Smart Dimension** to full define the sketch as shown.




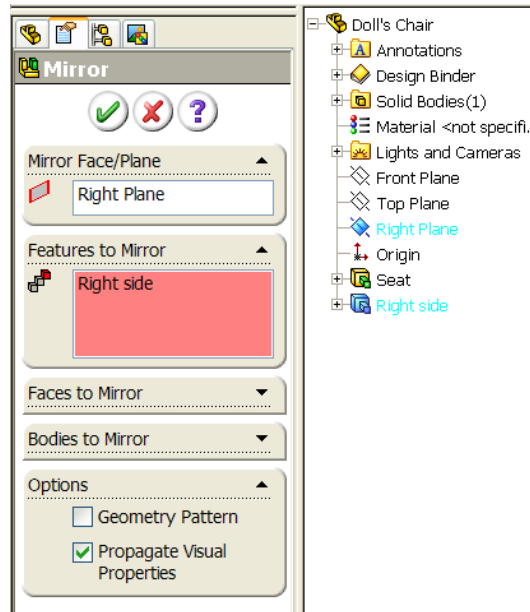
Extruded Boss/Base

Extrude the sketch using **Blind** as the end condition and a distance of 16mm.

Rename the feature as 'Right side'.

Mirror Feature

 **Mirror** the right hand side of the chair in the **Right Plane** to create the left side

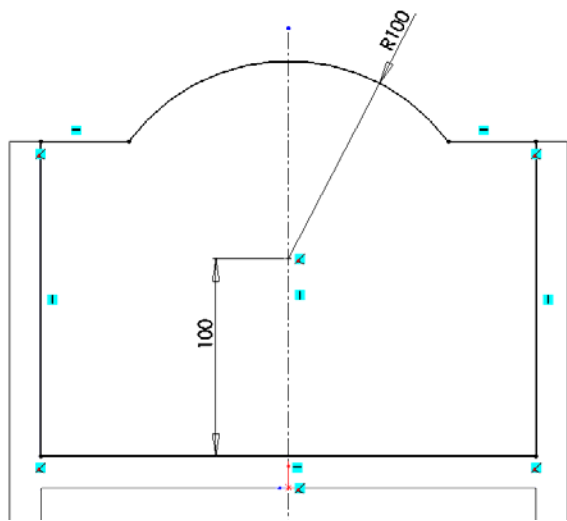


Rename the feature to 'Right side mirrored'.

Create sketch for back

Select the back surface of the seat/sides as the plane to create the sketch. Use the **Centreline**, **Rectangle**, **Circle** and **Trim** commands to draw the sketch.

Smart Dimension as indicated.



Extruded Boss/Base

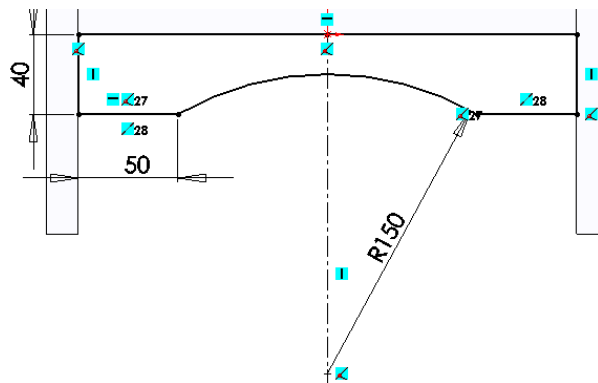
Extrude the sketch using **Blind** as the end condition and a distance of 16mm.

Rename the feature as 'Back'.

Create sketch for Rail

Select the front surface of the either side as the plane to create the sketch. Use the **Centreline**, **Rectangle**, **Circle** and **Trim** commands to draw the sketch.

Smart Dimension as indicated.




Extruded Boss/Base

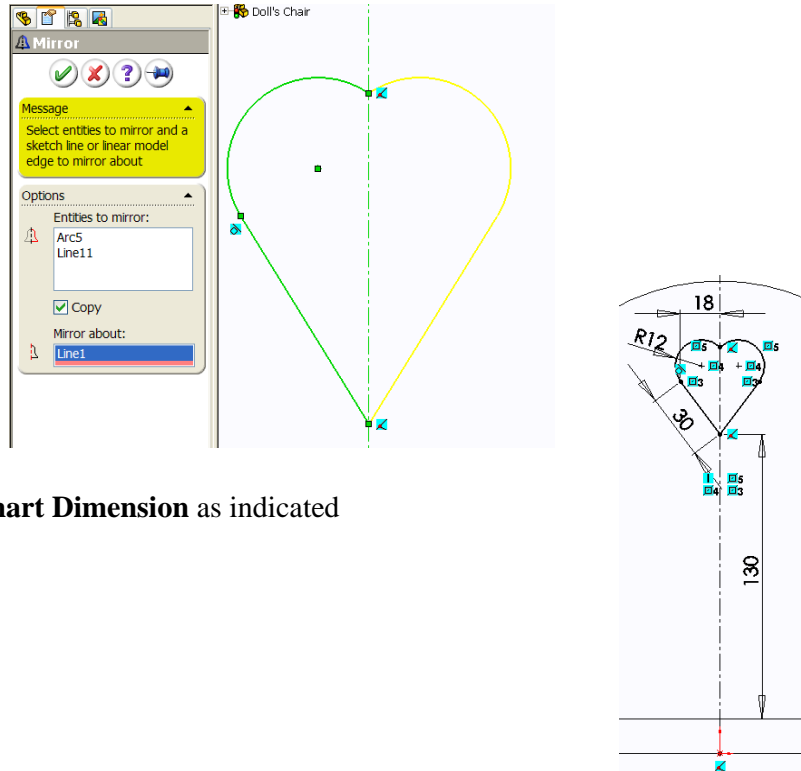
Extrude the sketch using **Blind** as the end condition and a distance of 16mm.

Rename the feature as 'Front Rail'.

Create sketch for 'Heart' Shape

Select the front surface of the 'Back' as the plane to create the sketch.
Use the **Centreline and Line** commands to draw the sketch the left hand side of the sketch.

Use **Mirror**  on the sketch tool to create the right hand side of the sketch



Smart Dimension as indicated

Cut Extrude

Cut Extrude using **Through All** as the end condition.

Fillet 1

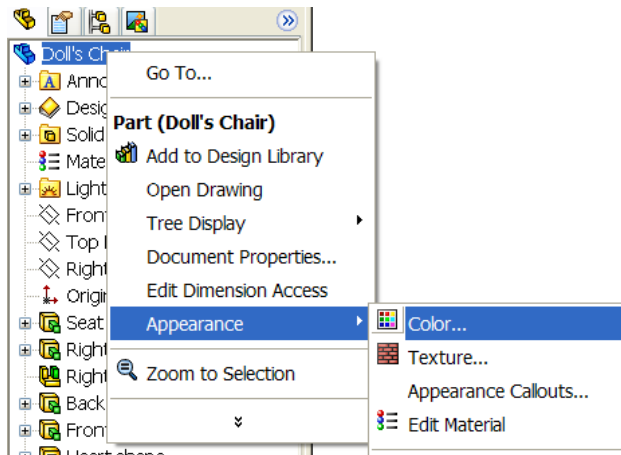
Using **Fillet**, add a 60mm fillet to the selected edges of the Back and Front Rail.

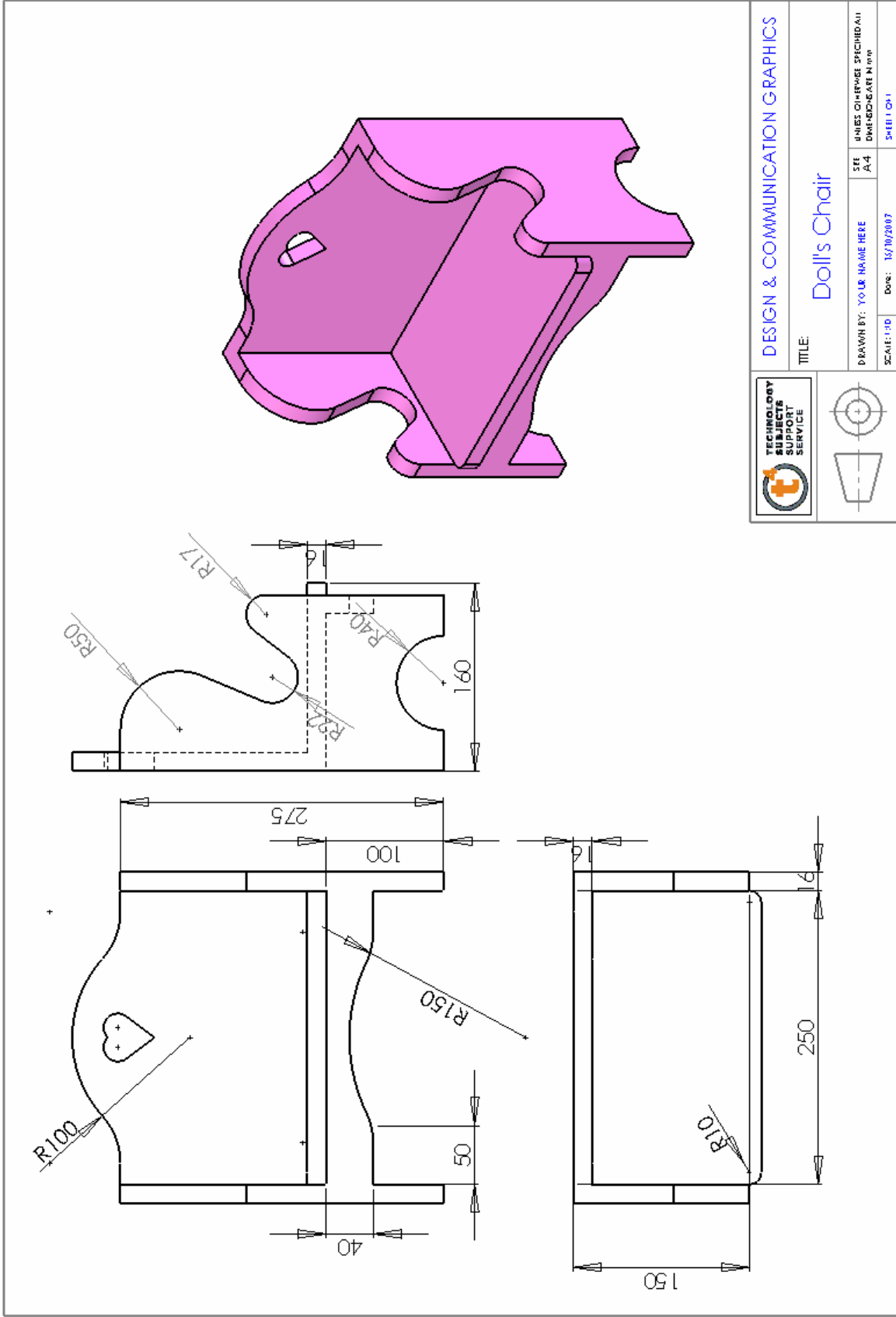
Fillet 2

Add a 10mm fillet to the front corners of the seat.

Edit Colour

Apply a colour to the part from the Color and Optics Property Manager.





DESIGN & COMMUNICATION GRAPHICS

TITLE: Doll's Chair



DRAWN BY: YOUR NAME HERE
 SEE DIMENSIONS SPECIFIED IN A4
 SCALE: 1:10
 Date: 15/10/2007
 SHEET 011