

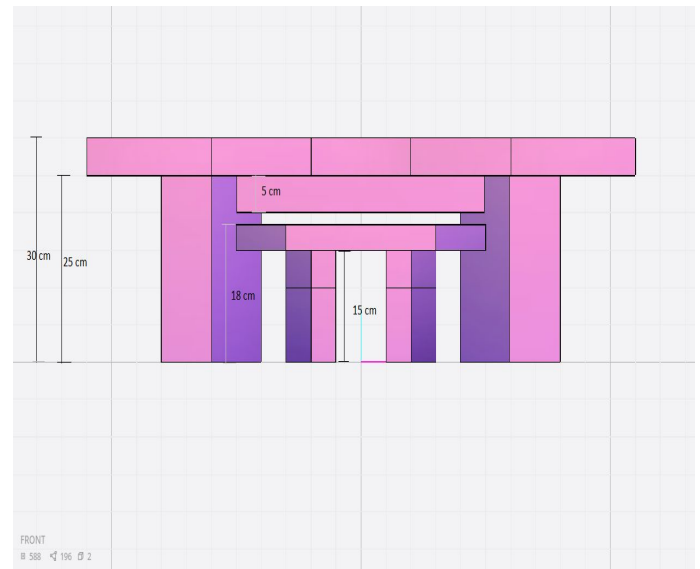
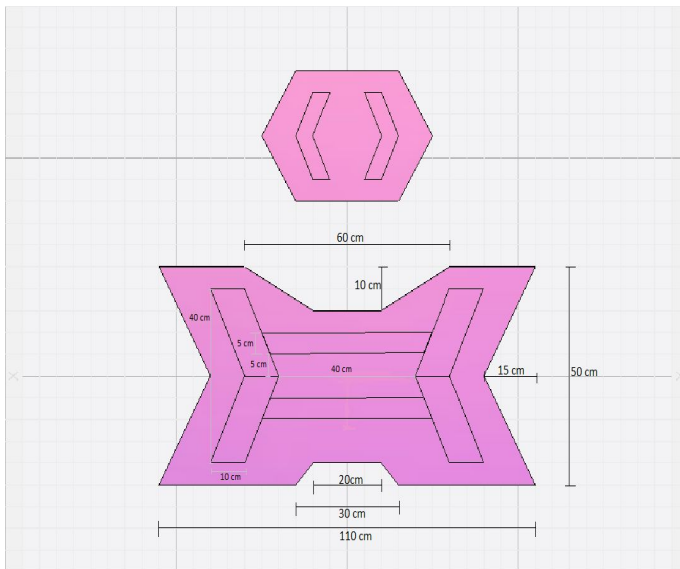
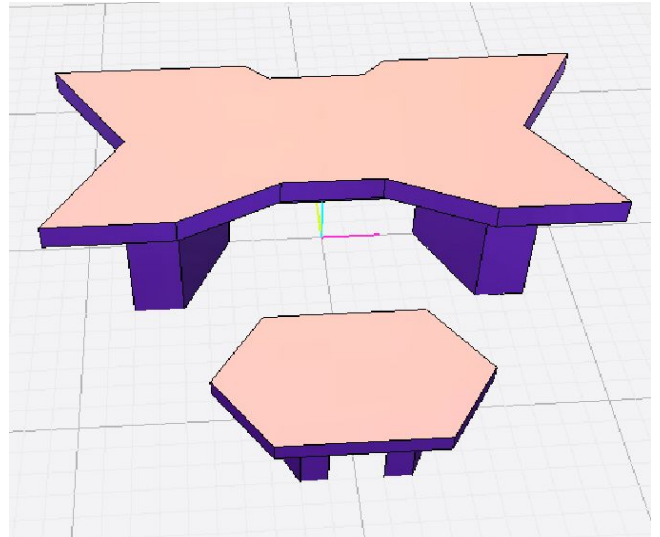
Wooden Desk and Stool

Objective

To design a wooden desk and table using the skills of carpentry.

Tools and Materials Required

- Wood
- Table Saw or Circular Saw
- Tenon Saw
- Jack Plane
- Steel rule
- Bench Vice
- Drill and Screws
- Glue
- Hammer and Nails
- Sand Paper
- Chisel



Procedure

1. Take the wood of appropriate type and dimensions. Cut it into a height of 5 cm and length of 110 cm using a circular saw. Keep width as large as possible if 50 cm width is not possible.
2. Use a jack plane to smoothen the wooden surface.

3. If wood of required width is not available, then lay several planks side by side to achieve the desired width and use tongue and groove planking. Drill pocket holes from outer planks to the inner planks. Then fix nails into the holes.
4. Now use a tenon to make the angular cuts as shown in the diagram. Then use a chisel to make it precisely according to measurements.
5. Next, cut the top for the chair using the same procedure, with appropriate dimensions.
6. Then, cut rectangular pieces of wood, four 50 cm x 10 cm x 25 cm pieces, these will be the legs of the table. Then make 45° cuts at the ends. Use a jack plane to smoothen it.
7. Cut two more pieces of 60 cm x 5 cm x 5 cm. These will be support pieces for the table top. Then make cuts at the inclination as given in the dimensioning.
8. Similarly cut the legs for the chair, using appropriate dimensions.
9. Use wood glue to attach two legs through the inclined cut. Then use nails to fix them tightly. Similarly attach the other two legs.
10. Next connect these with support pieces using the same procedure in the last step. This would make a frame.
11. Then lay the table top on top of the frame and attach it using wood glue. Fix it tightly with nails.
12. Using the same procedure as above assemble the chair.
13. Use a chisel to smoothen the edges. Then use a sandpaper to smoothen it further.

Important Aspects

1. Make sure the height of the stool is not less than half the height of the table. Otherwise it would become uncomfortable for the person to sit.
2. A single piece of wood of required width might not be available. In this case join several pieces together.
3. The height of the table top can be different.
4. The table's dimensions should be carefully chosen according to the space available in the room.
5. The table should be smooth otherwise it might become hard to use or cause injuries through blunt edges.

Challenges Faced

1. Fixing the legs using glue and nails should be done carefully, otherwise they can be loose.
2. Jack plane should be used to smoothen the wood before it is assembled as it might not be possible to use jack plane on every part of the table or chair after it is assembled.
3. Combining several planks of different widths to make the table top of required width might be difficult.
4. Sanding the entire table takes a lot of time.
5. Cutting the boards at the right inclination should be done with focus.

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