

# Report: Creating a Table and Chairs in Blender

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## 1 Introduction

This report explains the process of creating a 3D table and chairs using Blender. The goal of this project is to learn fundamental 3D modeling techniques such as shaping objects, applying materials, setting up lighting, and rendering a complete scene. Blender, as a powerful open-source software, provides a wide range of tools that make it possible to design realistic furniture models efficiently and with creative flexibility.

## 2 Modeling the Table

- Start with a Cube as the base shape.
- Use the Scale tool to flatten it into a tabletop.
- Apply Extrude and Inset tools to add thickness and edge details.
- Create legs using Cylinders or stretched Cubes, then position them under the corners of the tabletop.
- Use a Mirror Modifier or Duplicate command to replicate the legs evenly.

## 3 Modeling the Chairs

- Begin with a Cube or Cylinder for the seat base.
- Scale and shape it to form a realistic chair seat.
- Add legs by extruding or duplicating smaller meshes.
- Add the backrest using another cube or plane and connect it to the seat.
- Position the chair next to the table and adjust its height and proportions.
- Duplicate the finished chair (Shift + D) or use an Array Modifier to create multiple identical chairs.

## 4 Organization, Materials, and Lighting

- Group objects into Collections or rename them to stay organized.
- Apply Materials and Textures to the table and chairs (e.g., wood for the surfaces, metal for the legs).
- Add Lighting (Area or Point lights) to enhance the realism of the scene.
- Adjust the Camera to frame the model for rendering.

## 5 Rendering / Final Output

- Switch to Render View and select a rendering engine (Eevee or Cycles).
- Tweak light intensity, shadows, and reflections for better realism.
- Render the final image or animation and export it in your desired format.

## 6 Conclusion

The process of modeling a table and chairs in Blender demonstrates how simple shapes can be transformed into realistic 3D furniture through scaling, extrusion, and proper use of modifiers. Organizing the scene, applying materials, and configuring lighting are vital steps that give life and realism to the design. This exercise not only strengthens your understanding of Blender's interface and tools but also builds a strong foundation for exploring more advanced modeling, texturing, and rendering techniques in future projects.