For my project, I selected an image of a simple house with a gray roof, accompanied by two trees, a fence, and a ground area as my scene to replicate in 3D using OpenGL. The image provides a clear view of the layout, which I’ll use as a reference to accurately model each component. I chose this scene because it contains a manageable variety of objects, allowing me to practice different modeling techniques using basic 3D shapes and textures. The elements in this image provide a solid foundation for implementing textures, lighting, and camera control.

The scene will consist of four main objects: the house, the trees, the fence, and the ground plane. Each object will be represented by basic 3D shapes to keep the project within a manageable scope. The house will be the focal point, built using a box shape for the main structure and a prism or pyramid shape for the roof to capture the sloped design. For additional details, I’ll add small planes on the front of the house to represent doors and windows.

The two trees will bring a natural element to the scene, each made from a cylindrical trunk with cone shapes for the foliage, giving a simple but recognizable appearance. To depict a picket fence around the house, I’ll use a single plane with a fence texture, which preserves the visual effect without the complexity of modeling individual pickets. A ground plane will serve as the base for the scene, providing a surface for lighting and shadows that will enhance the scene. The objects in this scene incorporate four different basic 3D shapes: box, prism, cylinder, and cone, along with a plane for grounding the scene.

This project is achievable within my current skill level in OpenGL. It offers a balanced challenge that allows me to explore 3D modeling, texturing, and camera control without excessive complexity. I'm excited to see how textures and lighting will bring the simple shapes to life, adding realism to a straightforward scene. By working on this project, I’ll gain valuable experience with object creation, texture application, and lighting skills.

A house with trees and a fence

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