

CS423 Programming Assignment 2

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1 Overview

In this assignment, you will use the different camera types in THREE.js to generate different perspective views of a scene.

2 Problem 1

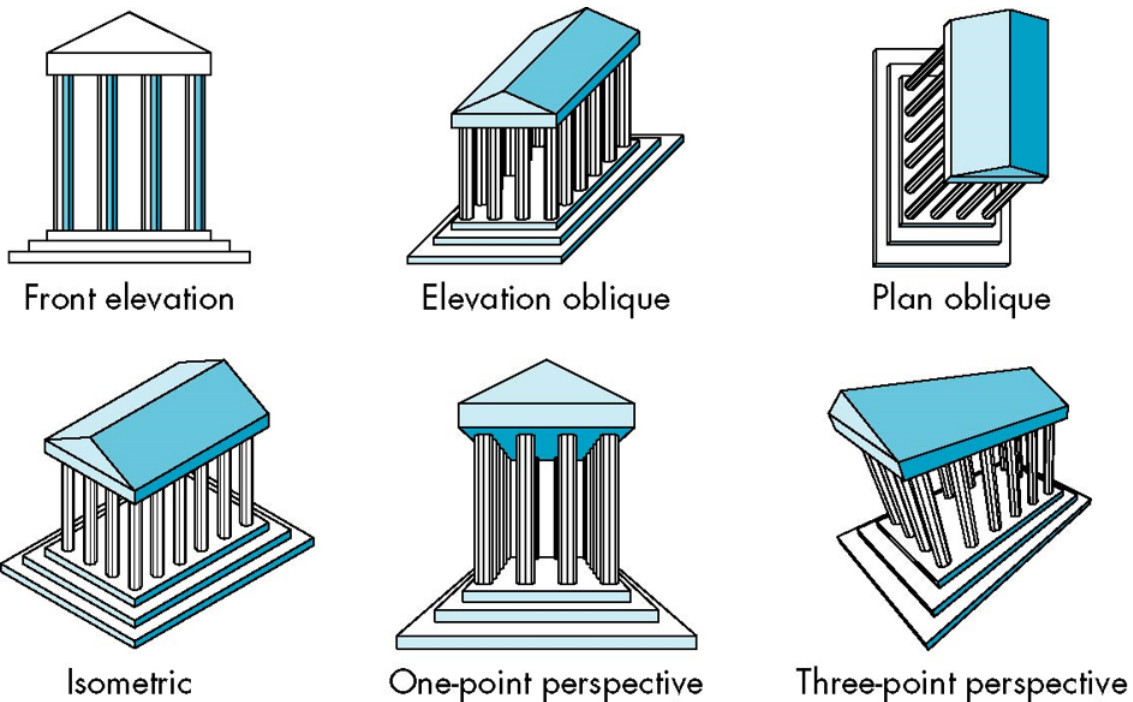


Figure 1: Examples of Perspective Views

1. Start with the basic scene from the first assignment.

2. Add two buttons to the HTML in your document.
3. Use the buttons to switch the camera between the different views listed in Figure 1.

3 Problem 2

Let's do some prep work for some upcoming assignments. We need to build a `THREE.js` web app that we will use to do experiments in lighting and texturing of objects.

Here's the scenario: You're in a 100 by 100 square-shaped room in a fancy art museum. In the very center of the room is a cube-shaped pedestal that is 20 units high. Sitting on this pedestal is a sphere that has a radius of 5 units.

Use a combination of a plane, cube, and sphere to render this scene in WebGL using `THREE.js`. Create four camera objects to render the scene as viewed by person standing at the center of the front, left side, right side, and rear walls of the room. Provide the user with UI controls that allow them to select one of these views. Your app should re-render the scene when the user selects a new camera.

4 Submission instructions

Combine your source code, test data, and examples of your program's execution into a single PDF document. Attach this document to your submission on Blackboard.