Introduction to Computer Graphics and Imaging: Final Project

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1. What each person in your group did
I did this project by myself.

2. What assets you got online, what assets you made yourself.
Things I made: table, wicker curtain, railing, flowerpots, string lights on the railing
Thing I got online: streetlight, flowers, succulents, and chair

3. How you met the project requirements.
(1) Main Geometry from scratch: at least half of the main objects in your scene needs to be modeled/simulated/sculpted from scratch.
Yes, I molded the table, railing, flowerpots and string lights from scratch.

(2) UV mapping and Texturing from scratch: for at least one of the objects made from scratch in your scene, you must 1. UV unwrap the object yourself and 2. create a texture from scratch either via hand-painting or procedural generation.
I unwrapped the flowers (hanging on the railing) and the chair.
For the chair, I first separated the cushion part from the main geometry and added leather texture, then added metal texture to the rest of it. For the flowers, although I downloaded a .blend version, the color of flowers didn't suit the lighting, so I unwrapped the flowers and chose more appealing color.

I created the texture for the martini on the table:
I used a glass shader for the glass. For the drink in the glass, I used a mixed shader (glass and glassy shader) to create the water-like texture, then used noise texture node for displacement to simulate the surface of water.

(3) Create a custom/procedural material: make at least one material with OSL script nodes, or non-shader nodes (i.e. texture, color, vector, converter nodes).
 I used many vector nodes in objects, almost every object has normal vector and displacement vector node. For example, for the wicker curtain, I used a magic texture to create the folds on it.

(4) Blender/Cycles feature: Use at least one advanced feature in Cycles or Blender (e.g. depth of field, motion blur, denoising, post-processing).
I used denoising in the final image.

4. Document/video you referenced
For the martini, I created the glass following the [model](#).

5. Technical contributions
For martini, I simulated water in the glass. First, I used a mixed shader (glass and glassy shader) to create the water-like texture, a volume absorption shader to simulate light absorption in liquid. Then I used a noise texture node for displacement to simulate surface of water.