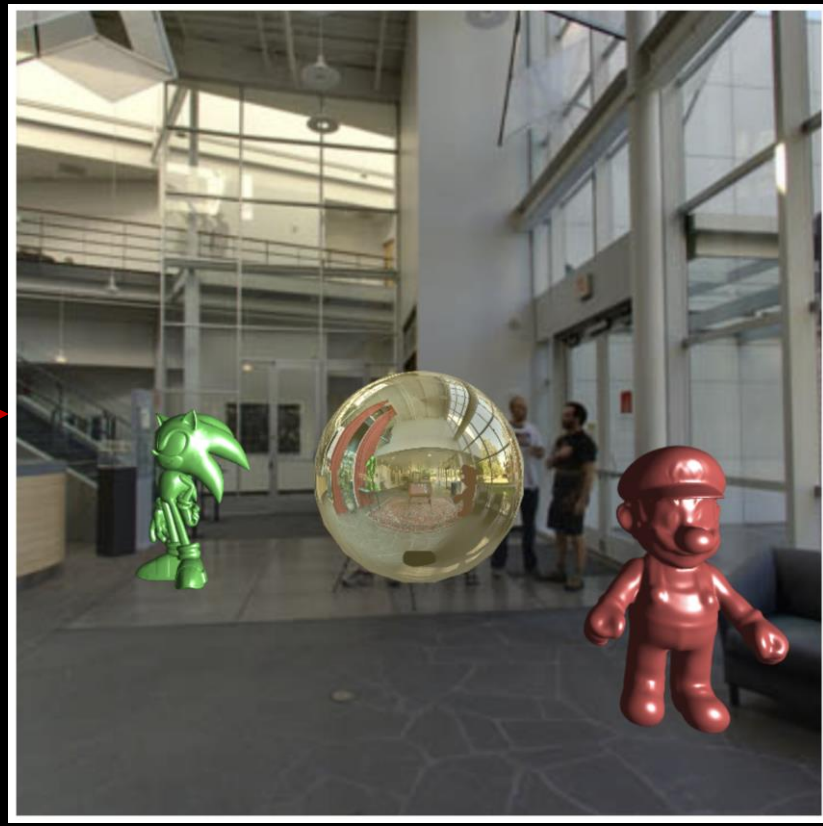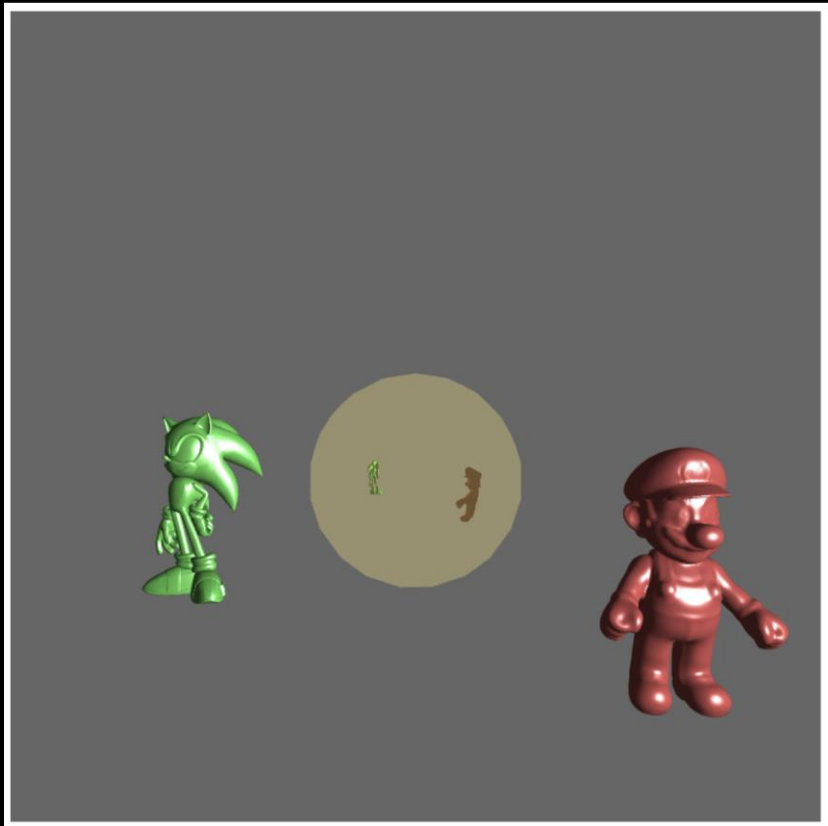# Lab 12

- Download the lab12 template
  - This essentially Ex12-3, but remove the ground
- Goal:
  - Add the environment background
  - Let the sphere reflect the environment background, too
- **Essentially, this lab is to combine Ex10-3 and Ex 12-3**
- https://www.youtube.com/watch?v=Qg7amBYc2QQ&ab_channel=Ko-ChihWang

- The following is the steps I suggest
  - Copy and paste Ex10-3 shader to this lab (of course, remember to compile it to make a program)

  - Copy "initCubeTexture()" to this lab and call it in main() to create the environment background cubemap

  - Copy the array "quad" to this lab and use "initVertexBufferForLaterUse" to create VBO for this quad (for use of background screen)

  - You may add one function "drawEnvMap()".
    - The responsibility of this function is to draw the environment background on the background screen quad. Similar to what we did in Line 177-186 in Ex10-3.

  - Call "drawEnvMap()" in draw() and renderCubeMap()
    - To render the background environment in your scene and on-line rendered cube map

What You Should Do for "Submission"

Submission Instruction

- Create a folder
  - Put the html and js files in the folder
  - Zip the folder
  - Rename the zip file to your student ID
    - For example, if your student ID is "40312345s", rename the zip file to "40312345s.zip"
  - Submit the renamed zip file to Moodle

- Make sure
  - you put all files in the folder to zip
  - You submit the zip file with correct name
- You won't get any point if
  - the submitted file does not follow the naming rule,
  - TA cannot run your code,
  - or cannot unzip your zip file.