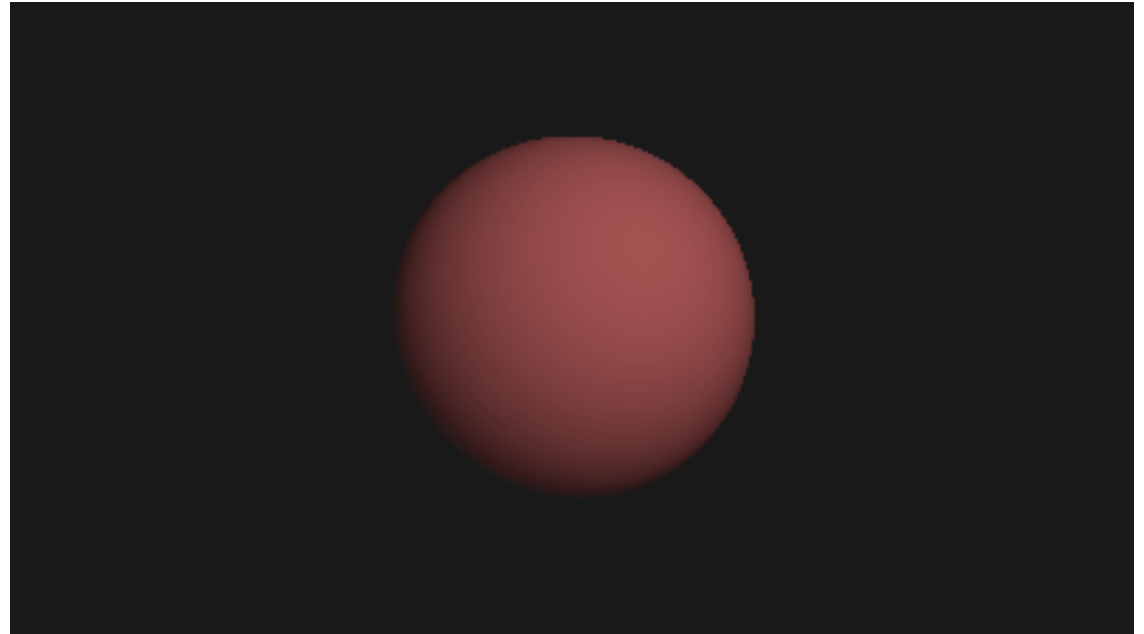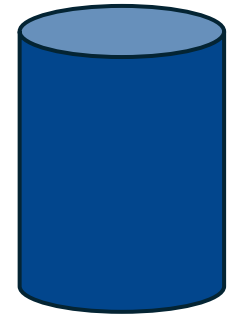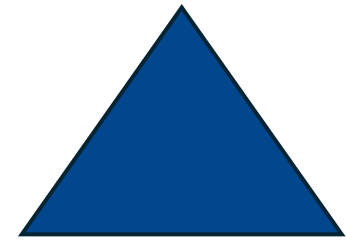# GVSS 2024 Graphics Project

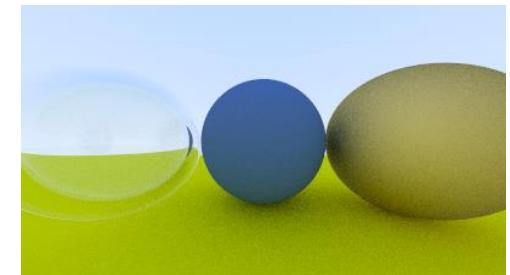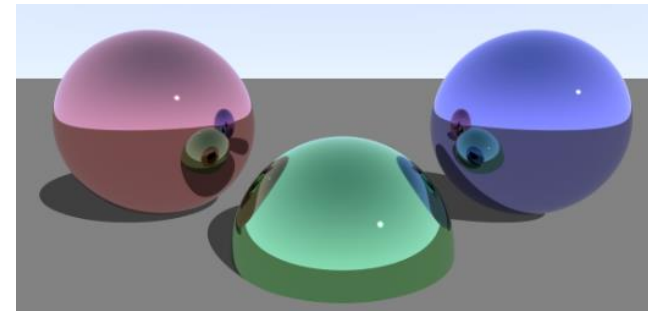# So far you have implemented ray tracing...

- Generating eye rays
- Ray-sphere and ray-plane intersection
- Blinn-Phong reflectance
- Shadow rays

# Go further with your ray tracer (1/2)

- Support more types of shapes, e.g.
  - Cylinders
  - Boxes (cuboids)
  - Any other mathematical shape you like

- Add recursive ray tracing
  - Mirror-like objects (reflection)
  - Transparent objects (refraction)

Go further with your ray tracer (2/2)

- Render an interesting scene
  - Multiple objects
  - Multiple light sources
  - Reflections and refractions
  - Something realistic and/or beautiful

- Implement path tracing for global illumination
  - Indirect lighting
  - Caustics
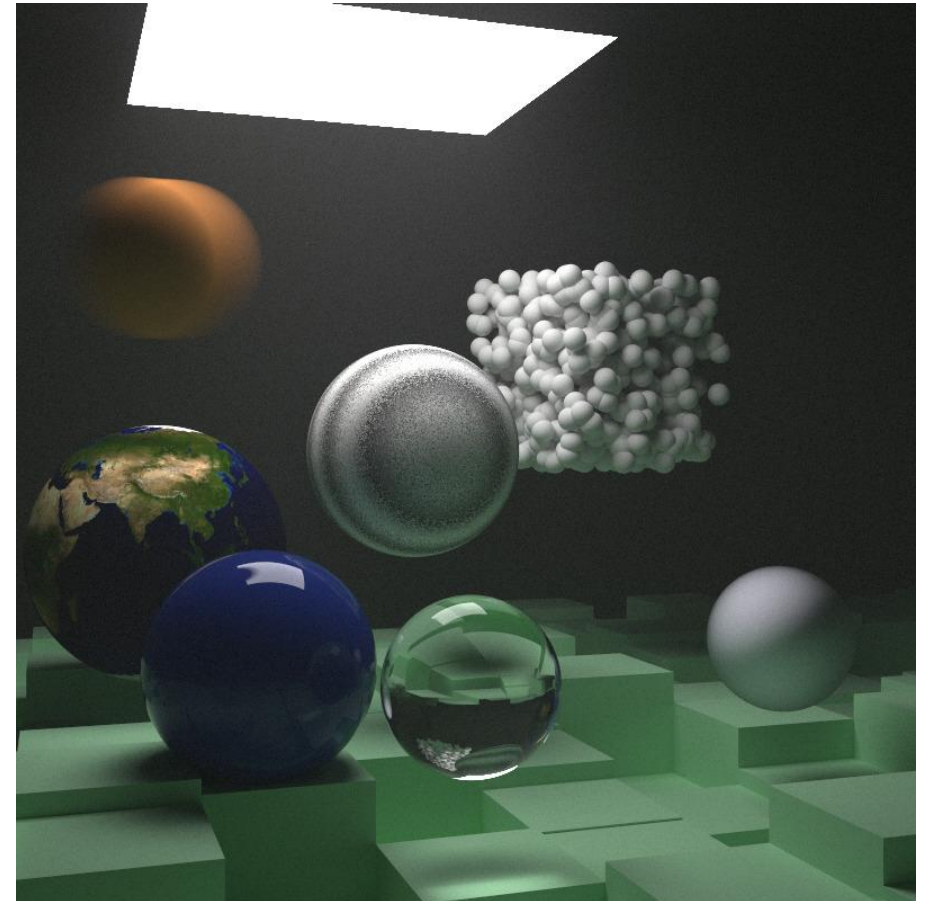
Summary

- Support more types of shapes

- Add recursive ray tracing (reflection and refraction)

- Render an interesting scene

- Implement path tracing for global illumination

You don't have to do all of the above, but do as much as you can.

We will judge you on the realism and visual appeal of your final rendered image, and the number of (correctly implemented) features it shows off.

Starter Code: github.com/rupeshkmr/gvss24