

Hoang Sy Nguyen

CS373

Assignment 5.

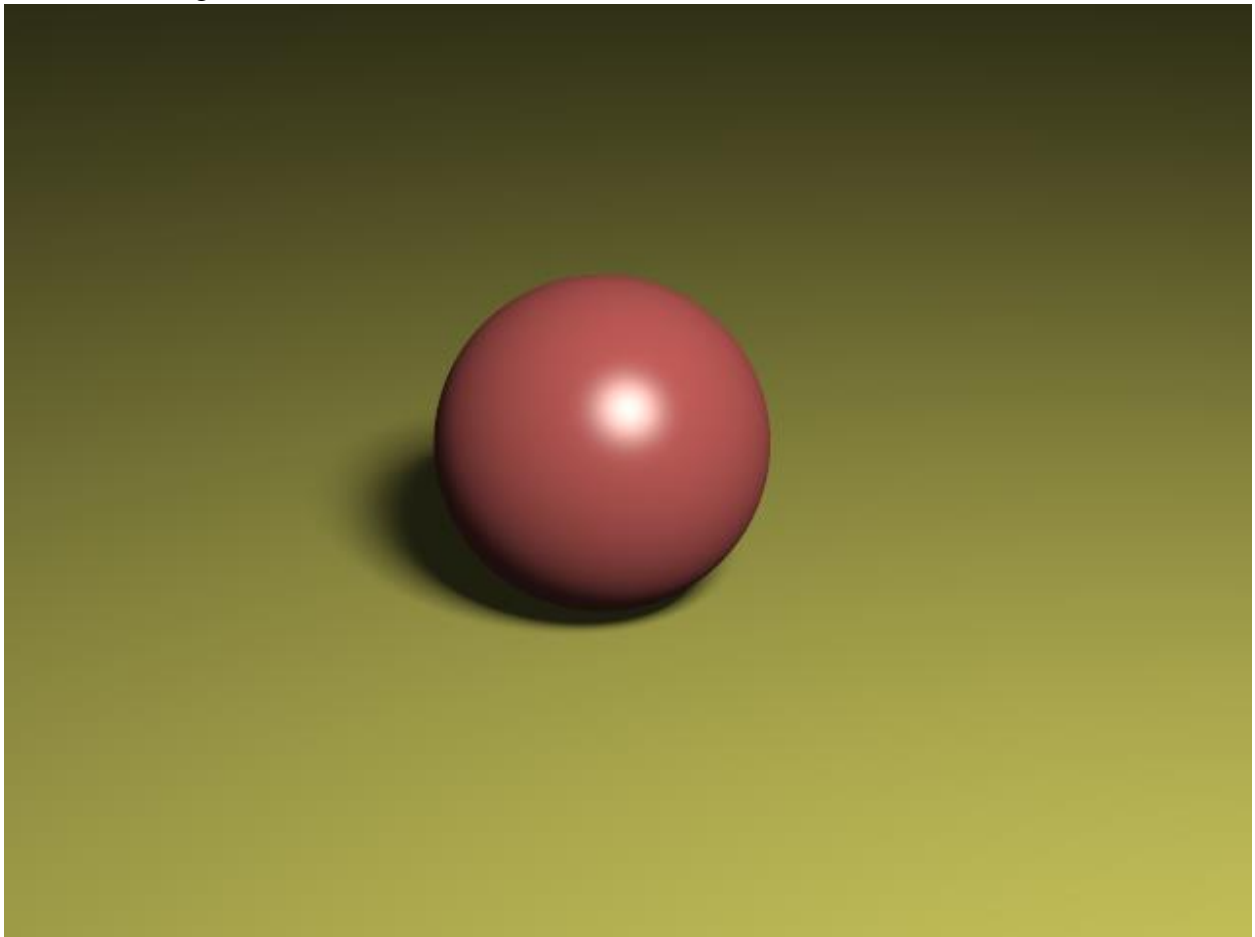
1) Additional method created during this assignment:

`HitRecord checkIntersection(Ray ray)`: return a hit record that records the hit of ray to the closest shapes

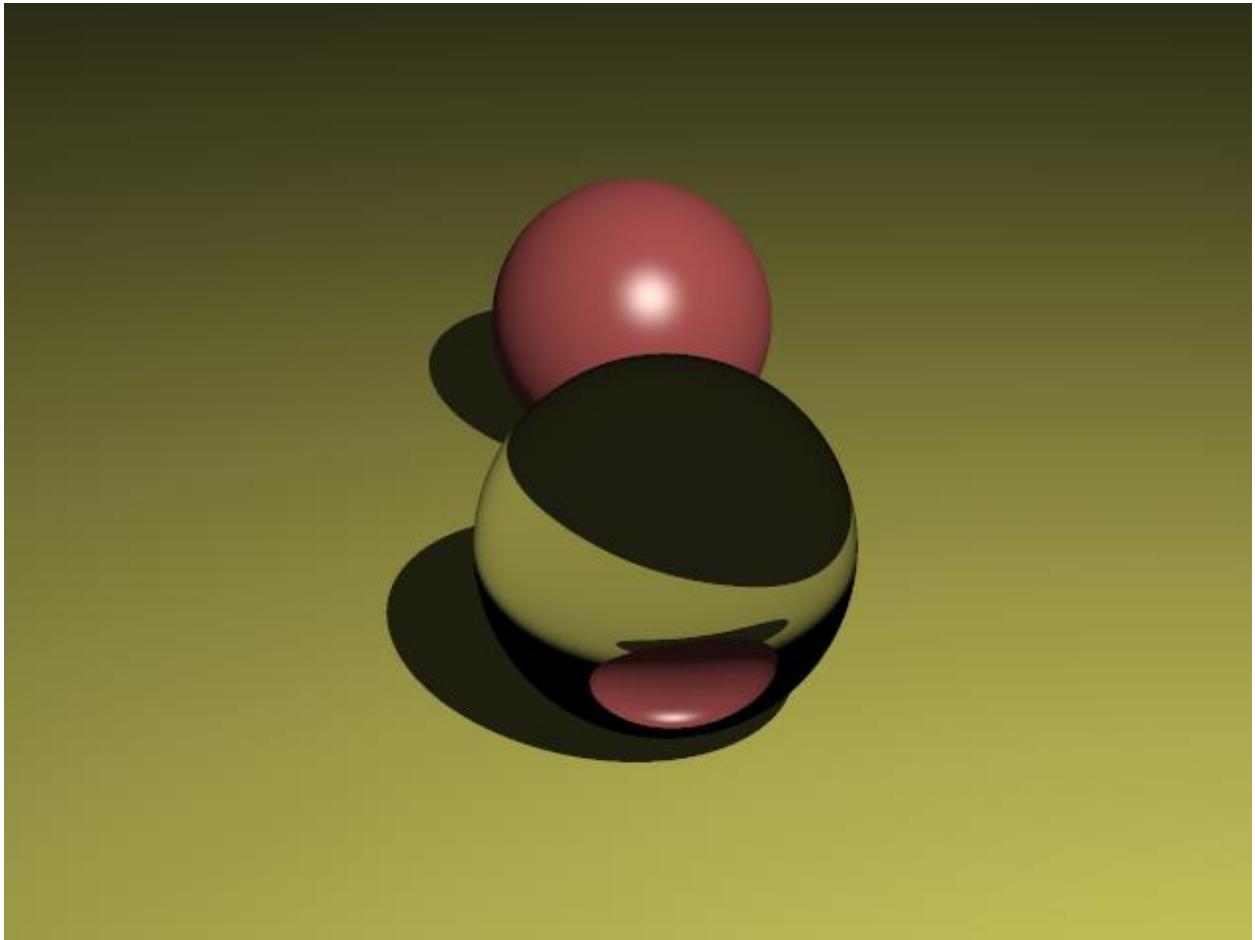
`Color3f colorMult(Color3f a, Color3f b)`: return a multiplication of 2 colors.

I also applied the regular sampling method to the ray generating method, so that there would be $x_{\text{sample}} * y_{\text{sample}}$ ray in 1 pixel instead of only 1 ray through the center of pixel. The generated picture look smoother after applying sampling method.

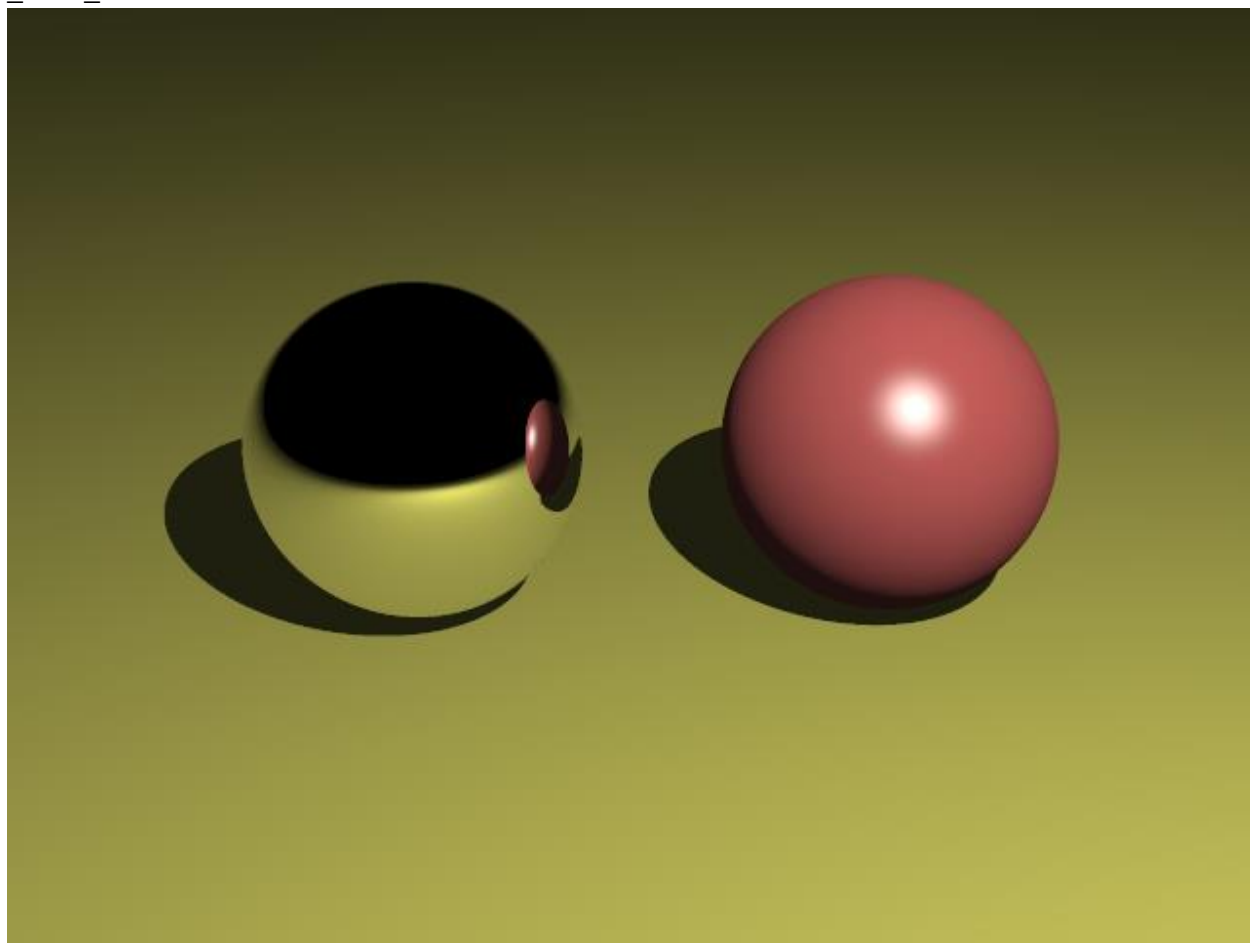
2) `_Ball_arealight.scene`:



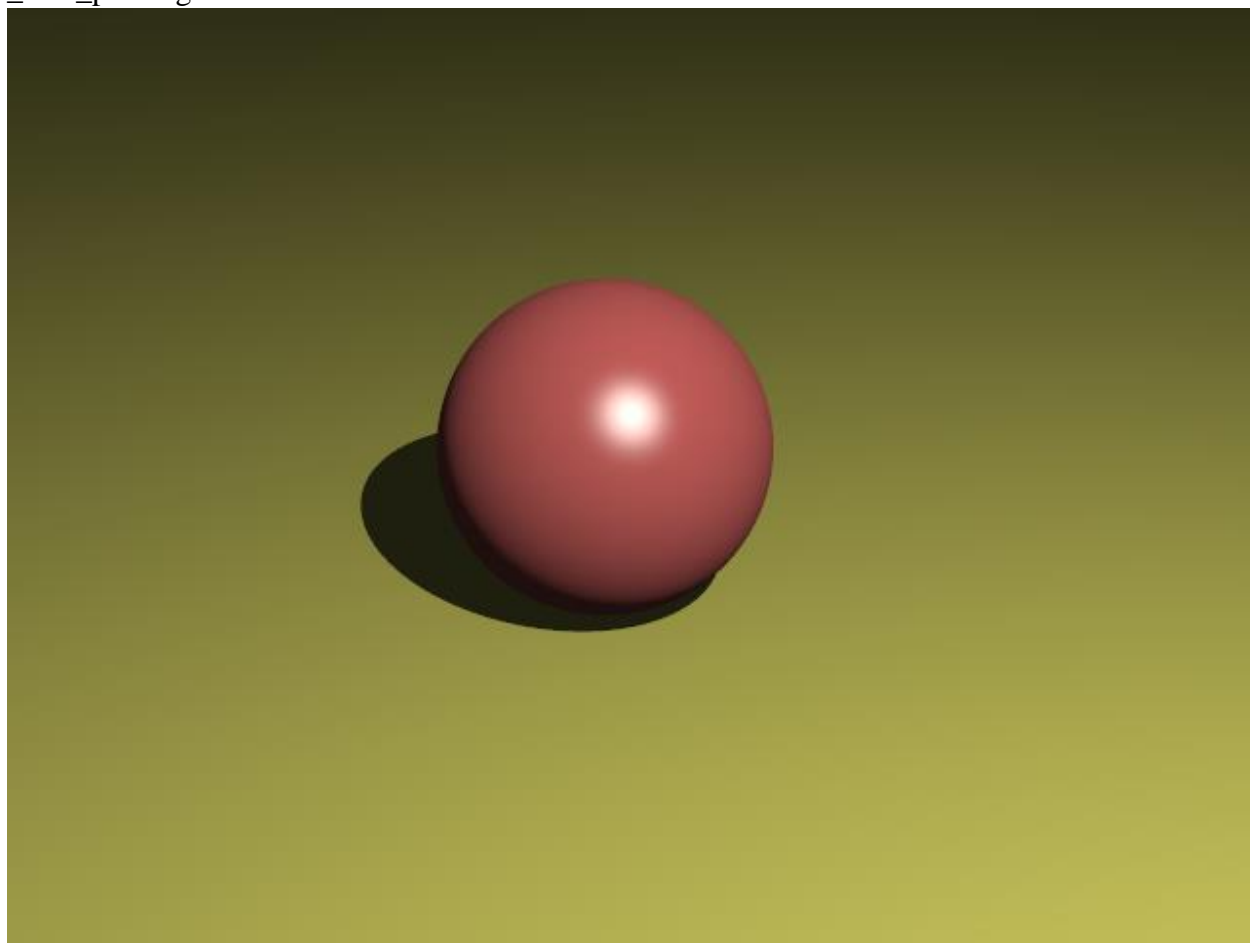
_Ball_glass.scene:



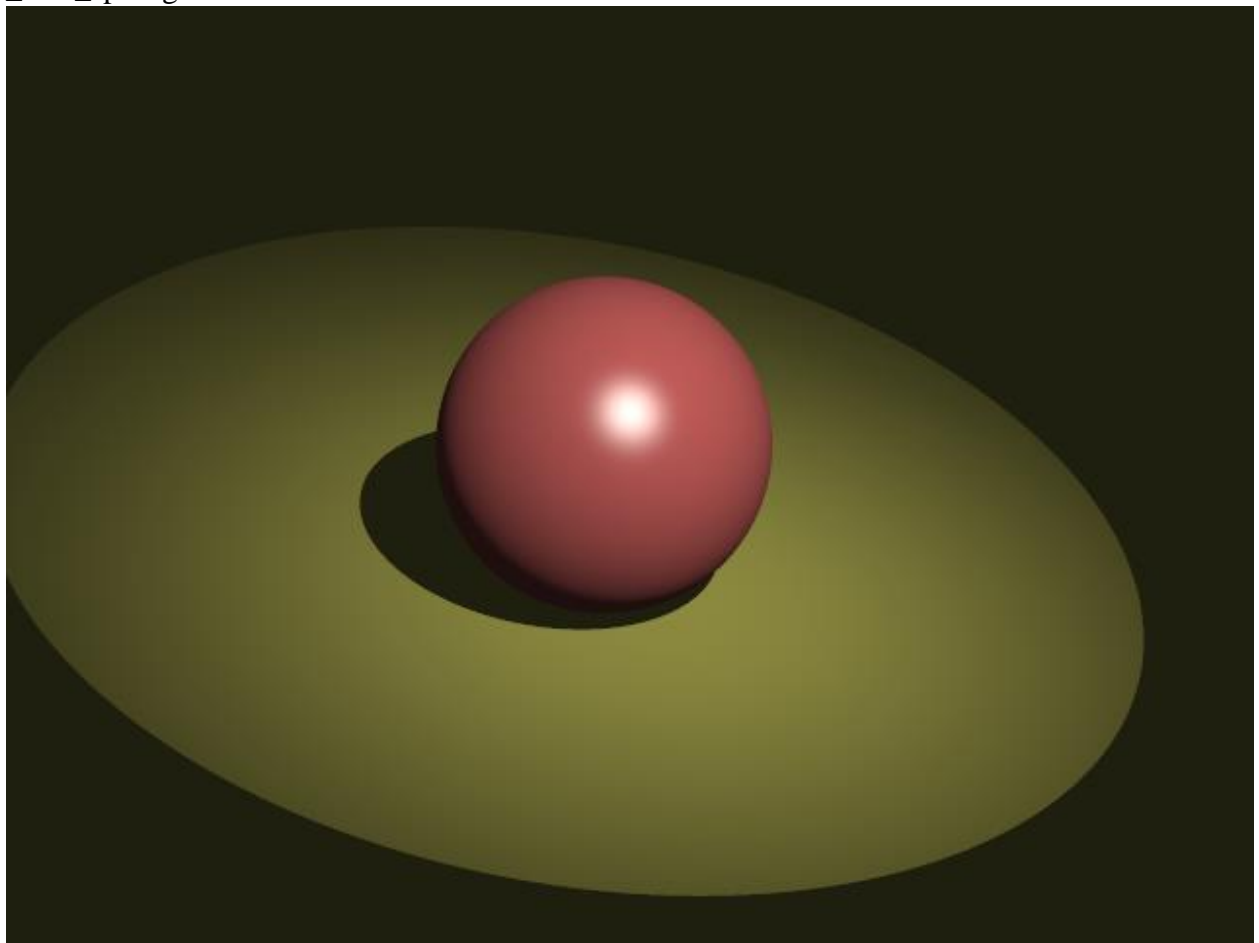
_Ball _mirror.scene



_Ball_pointlight.scene



_Ball_spotlight.scene





Head.scene

Triangle_pointlight.scene:

