SUBJECT CODE: CS 6620

SUBJECT: ADVANCED COMPUTER GRAPHICS II
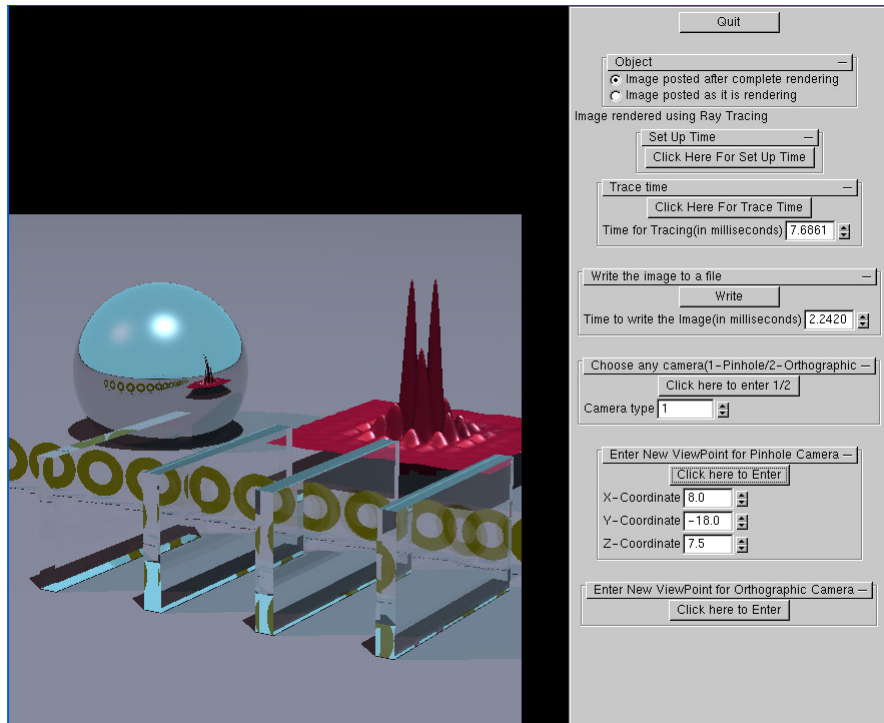
LEENA KORA
EMAIL:leenak@cs.utah.edu
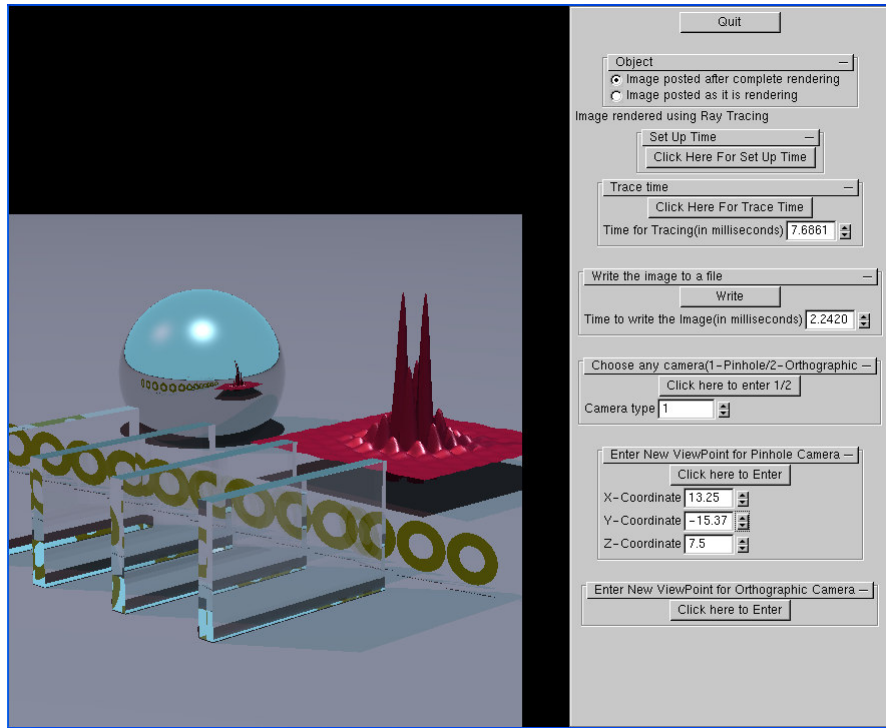
Unid: u0527667

PROGRAM 5

**PART 1(Required Image1)**

PART 1(Required Image2)

PART 2

Link to my code: http://www.cs.utah.edu/~leenak/Code5.txt

PART 3(Creative Image)

- I decided to use metal and dielectric material models in a very different way for my creative image part.
- I thought of creating air bubbles around my snow man and place it on a frosen snow surface.
- To make a frosen snow surface I created a box with dielectric material and placed my snow man on it.
- I used spheres with matel material for creating air bubbles and placed them around my snow man.
- I used Oren Nayar material for my snow man.

Quit
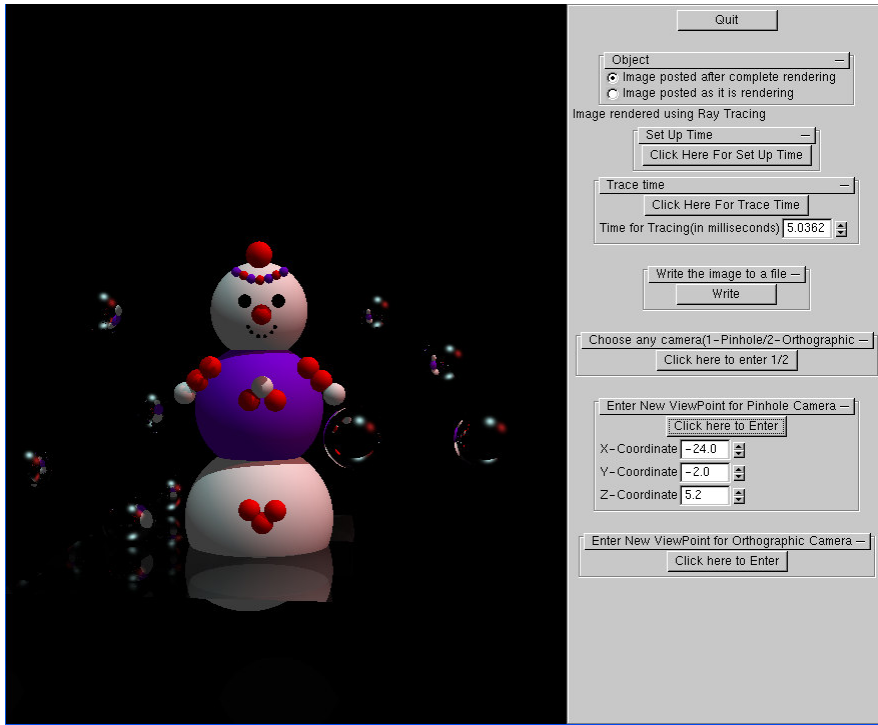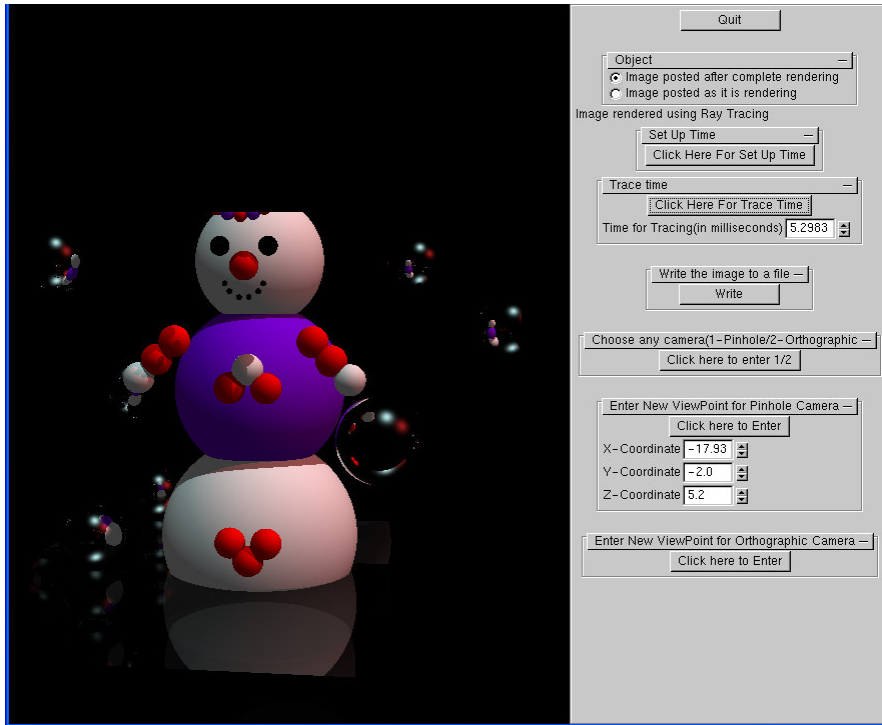
wasn't that cool!!

PART 4(Description of my design choices)

- For this assignment, I just created four more sub classes of material class as Metal_material, Dielectric_material, Phong_material and OrenNayar_material.
- I was little bit confused while implementing color_material function(0r shade) for dielectric material and I spent 5 hours debugging.
- Earlier I considered fresnel_reflection component and fresnel_transmit as color objects and when I considered them as double values I got my dieelctric material working correct.
- I just followed the slides for the shade method of the materials step by step..

PART 5(Extra credit 1)

- I implemented Oren Nayar material model as an advanced material model.
- While implementing color_material function(or shade), I was not getting what values to apply to Ka and Kd. I just used 0.4 and 0.6 as we used to use those values in the previous assignments.
- The first image shows the scene with Oren Nayar material applied to rings, plane and heightfield.
- The sceond image shows the scene with Lambertian material applied to rings, plane and heightfield just to compare the quality of the objects in the images.

Quit

Object —

- ( ) Image posted after complete rendering
- ( ) Image posted as it is rendering

Image rendered using Ray Tracing

Set Up Time —

Click Here For Set Up Time

Trace time —

Click Here For Trace Time

Write the image to a file —

Write

Choose any camera(1-Pinhole/2-Orthographic —

Click here to enter 1/2

Enter New ViewPoint for Pinhole Camera —

Click here to Enter

X-Coordinate 8.0

Y-Coordinate -18.0

Z-Coordinate 7.5

Enter New ViewPoint for Orthographic Camera —

Click here to Enter

Quit

Object
◉ Image posted after complete rendering
○ Image posted as it is rendering

Image rendered using Ray Tracing

Set Up Time   —
Click Here For Set Up Time

Trace time   —
Click Here For Trace Time

Write the image to a file —
Write

Choose any camera(1–Pinhole/2–Orthographic —
Click here to enter 1/2

Enter New ViewPoint for Pinhole Camera —
Click here to Enter

Enter New ViewPoint for Orthographic Camera —
Click here to Enter