

# **Project C: Rocket, Star and Sphere**

CS 351

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## **User's Guide:**

Turn on/off light when clicking button.

Switch between Gouraud shading and Phong shading when clicking button.

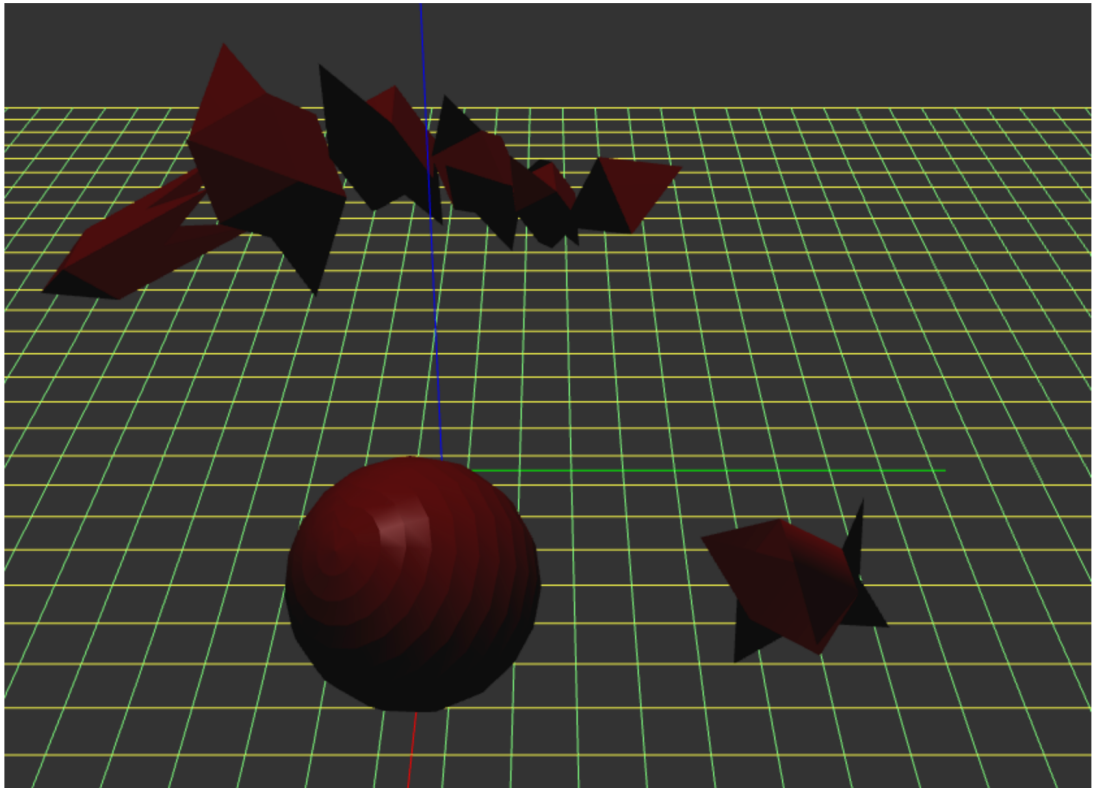
Turn on/off Blinn-Phong lighting when clicking button.

Change material by pressing 'M' key.

Change light source location, ambient, diffuse and specular effect with sliders.

Arrow keys aim the camera without moving it: Left/right arrow keys rotate view left/right; up/down arrow keys tilt up/down. WASD keys move the camera without rotating it: W/S keys move forwards/backwards in direction-of-gaze; A/D keys 'strafe' camera left/right at current altitude.

## Results:



Material: 1.MATL\_RED\_PLASTIC.  
Press M to change material.

Light Source Location X  Y  Z

Ambient R  G  B

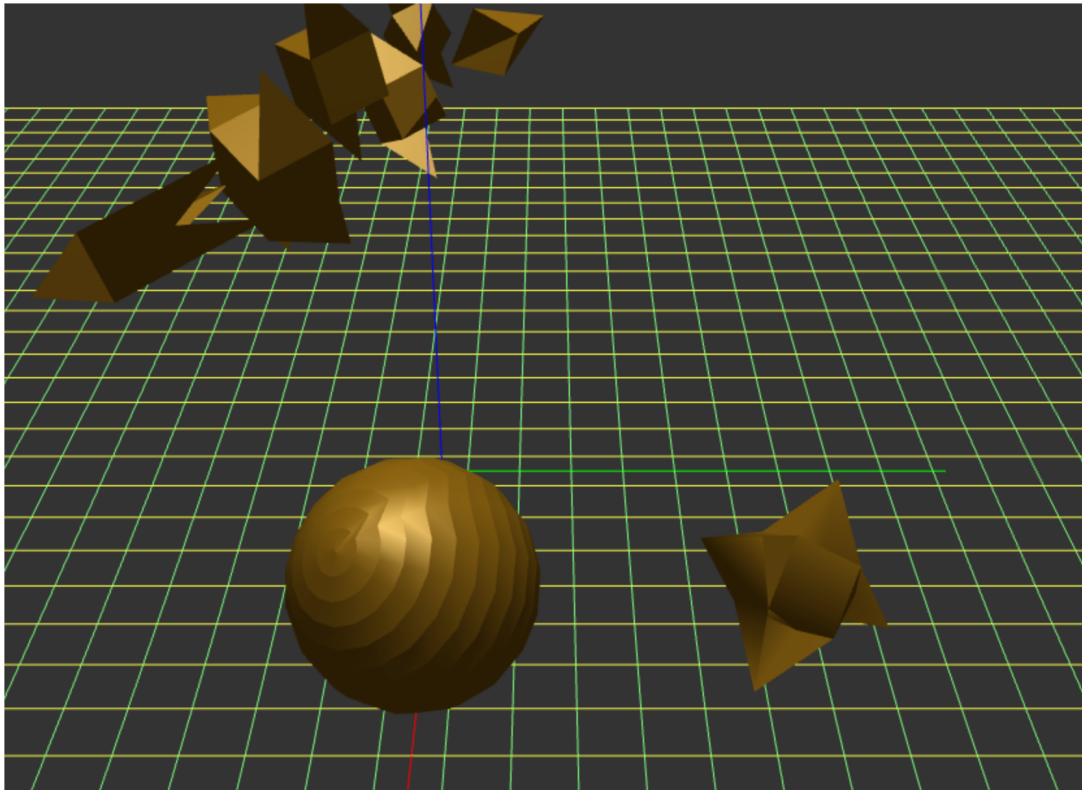
Diffuse R  G  B

Specular R  G  B

Press W/S to zoom in and out. Press A/D to strafe left and right. Press right, left, up, or down arrow key to change view.

*Figure 1 Single Viewport display.*

Single-Viewport Display fills top 70% of browser window of any shape. When changing browser window width, canvas will be automatically re-sized to fill the full width of browser window and at exactly (70%) of its height.



Turn off Light Switch from Gouraud Shading to Phong Shading Turn off Blinn-Phong Lighting Material: 6.MATL\_BRASS. Press M to change material.

Light Source Location X Y Z

Ambient R G B

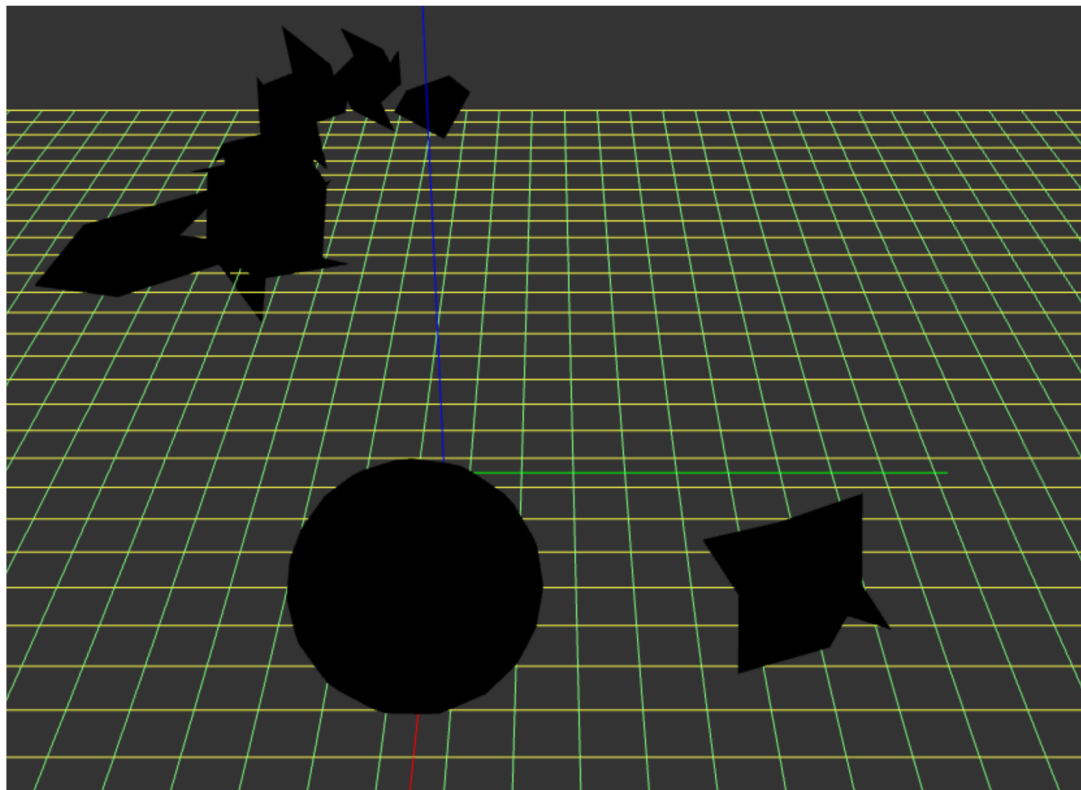
Diffuse R G B

Specular R G B

Press W/S to zoom in and out. Press A/D to strafe left and right. Press right, left, up, or down arrow key to change view.

Figure 2 Change Material.

User can change the material by pressing 'M' key.



Material: 6.MATL\_BRASS. Press M to change material.

Light Source Location X  Y  Z

Ambient R  G  B

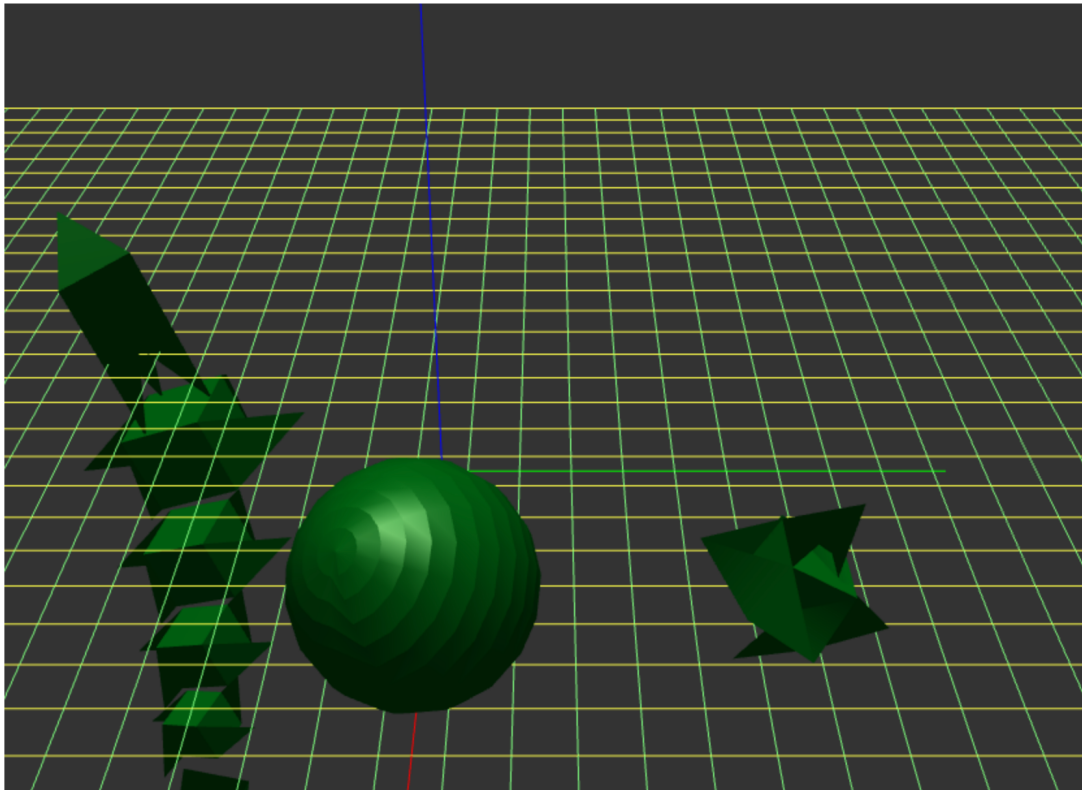
Diffuse R  G  B

Specular R  G  B

Press W/S to zoom in and out. Press A/D to strafe left and right. Press right, left, up, or down arrow key to change view.

Figure 3 Turning off lighting.

Light can be turn on and off by clicking the first button.



Material: 6.MATL\_BRASS. Press M to change material.

Light Source Location X  Y  Z

Ambient R  G  B

Diffuse R  G  B

Specular R  G  B

Press W/S to zoom in and out. Press A/D to strafe left and right. Press right, left, up, or down arrow key to change view.

Figure 4 Adjust slide bar.

Change light source location, ambient, diffuse and specular effect with sliders.

## Scene Graph:

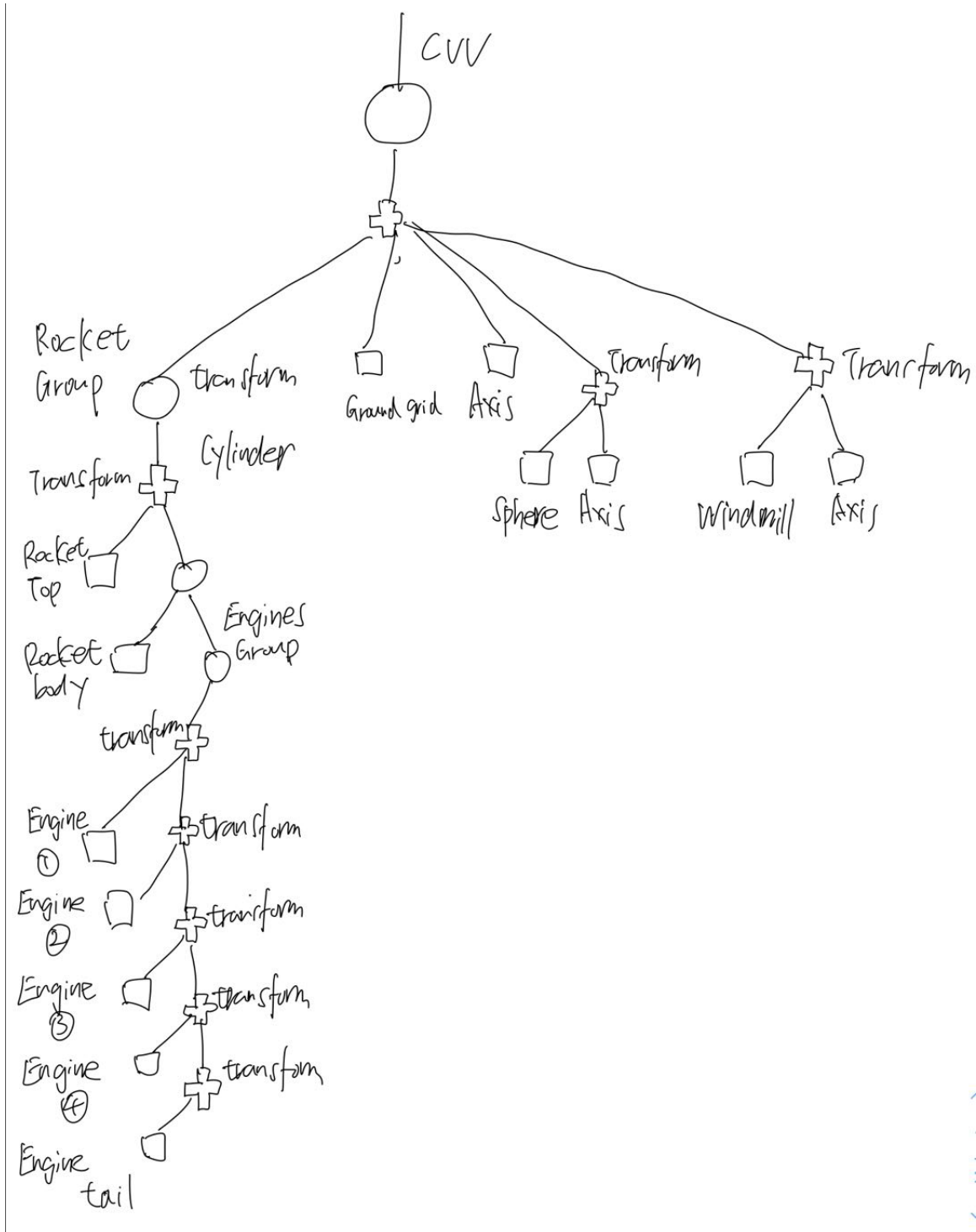


Figure 5 Scene Graph