Project B: Spinning Spinning rabbit's world.

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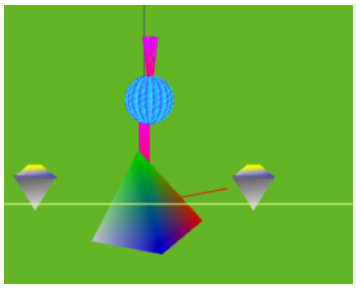
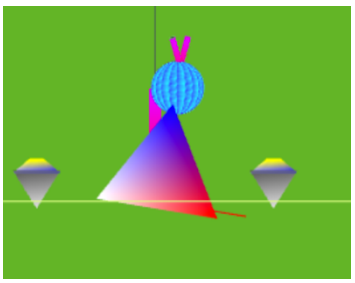
Goals: 1) create a ground plane. 2) create animated, adjustable 3-Jointed, 4-Segment Shape. 3) create 4 or more Additional Multi-color 3D Shapes placed on ground plane. 4) draw 3D axes. 5) create two Tetrahedrons which show orientation-dependent on-screen vertex colors, smoothly interpolated between vertices. 6) creare 2 Side-by-Side Viewports Divides display window evenly into 2x2 grid of viewports that always fill the window and never distort (squash/stretch) the images when users re-size window for taller or wider images. 7) Perspective Camera with 40-degree vertical field-of-view (top-to-bottom) in left viewport, AND Orthographic Camera view in right viewport. 8) make smoothly adjustable 3D View Control 9) create user adjustable asymmetric camera; make all 6 frustum parameters individually user-adjustable 10) make camera follow the end of a shape. 11) create 'flying-airplane' navigation controls: forward velocity; aiming by roll, pitch, yaw 12) create quanternion-based 'trackball' control of orientation for tetrahedron.

User's Guide:

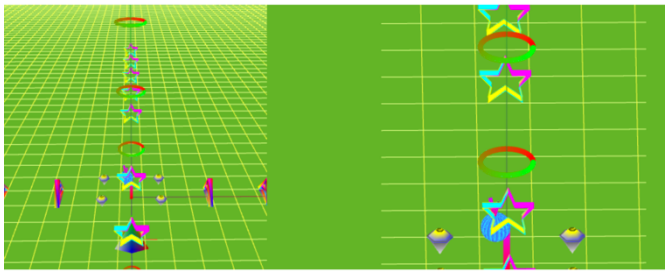
Mouse Interaction: 1)Double click on the canvas to adjust the view. 2)Drag on the screen to rotate the Tetrahedron.





Keyboard Interaction: Press "r" to return the original status. Press "b" and "l" to adjust the size of the rabbits head, arrows to adjust the position of the rabbits"" head

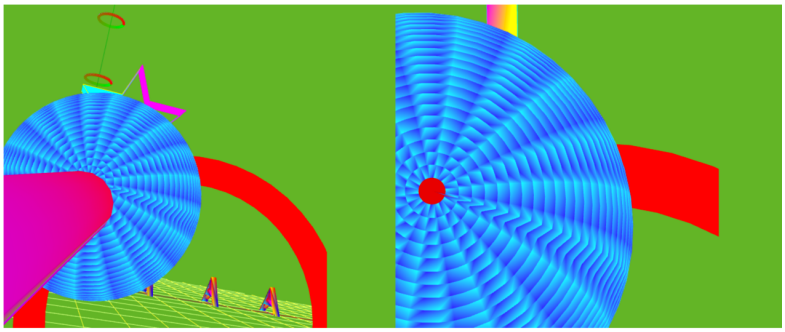
Press "w" "a" "s" "d" "," "." to adjust the position of your eyes step by step. "shift" and "control" to adjust the speed of your movement.



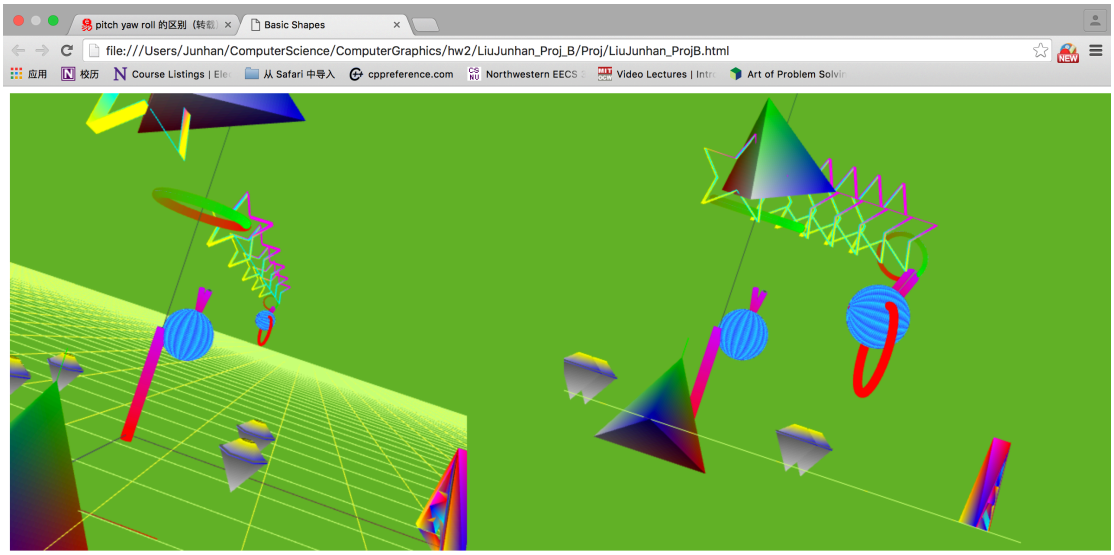
Press "1" "2" "3" "4" "5" "6" "7" "8" to adjust the frustrum.

Button Interaction: Press Yaw left and right, Pitch up and down to yaw up and down and pitch up and down

Press follow to see the world with the end of the wierd joints.



Press fly to start and stop the flying mode.



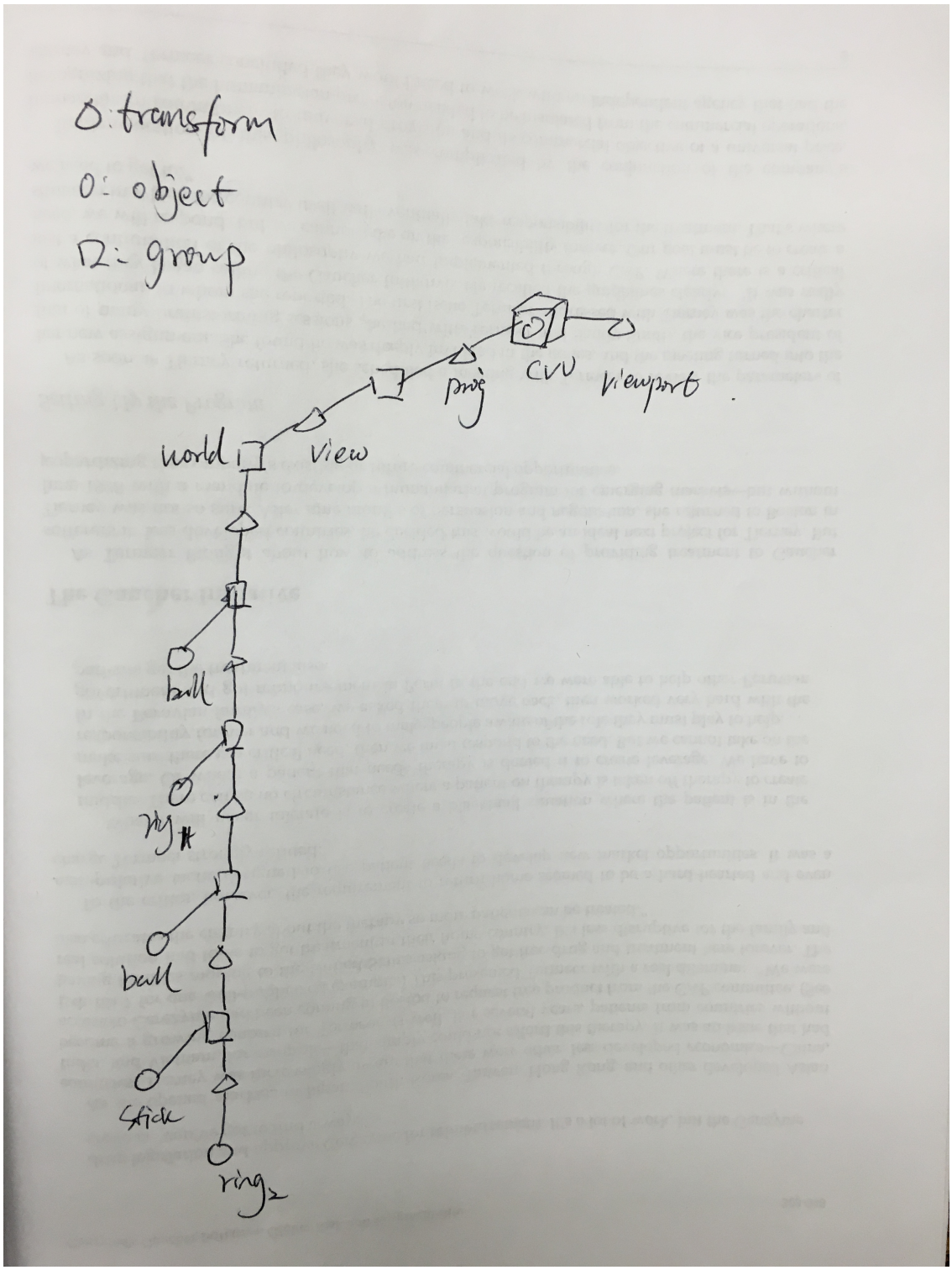
Yaw left | Yaw right | Pitch up | Pitch down

follow | fly

Instruction:

Mouse Interaction: 1)Double click on the canvas to adjust the view. 2)Drag on the screen to rotate the Tetrahedron.

Keyboard Interaction: Press "r" to return the original status. Press "b" and "l" to adjust the size of the rabbits head.


△: transform
○: object
□: group
proj
CVV
viewport
world
view
ball
ball
stick
ring