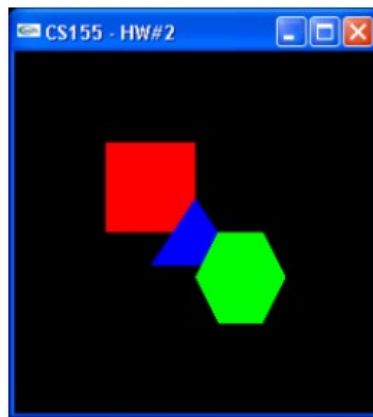
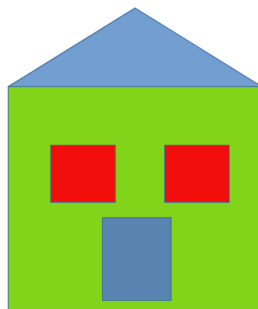


1. Write a menu driven OPENGGL app to draw different primitives as given below.
  - a. Draw a line
  - b. Draw unfilled rectangle
  - c. Draw unfilled triangle
  - d. Draw unfilled hexagon
  - e. quitThe program must allow user to input its choice and do according to the choice. Program must also allow the user to input the vertices of the primitives.
2. Write an OPENGGL app draws following polygons: red square, blue triangle and green hexagon at the same location and style.



3. Write a OPENGGL app to animate bouncing square.
4. Write a OPENGGL program to animate the revolving triangle.
5. Write a OPENGGL app to draw red square at the point of click.
6. Write a OPENGGL app to display following house.



7. Write an OPENGGL app to generate 50 random points and plot them.
8. Implement direct method to draw a line given two ends points.
9. Implement DDA to draw line given two end points of line.
10. Compare time taken to draw given line using direct method, DDA and Bresenham.
11. Implement mid point algorithm to draw circle given its radius and center.
12. Implement mid point algorithm to draw ellipse given its primary, secondary axis and center.

13. Write an OPENGL app to rotate a rectangle about origin with one point being (100, 100), width 200 and height 50 by 30 degree anticlockwise by using opengl function.
14. Do the same thing in Question no. 12 without using opengl rotate function.
15. Use the rectangle in Question no. 12 and scale it by (2,2) using opengl function.
16. Do the same thing in Question no. 14 without using opengl scaling function.
17. Use the rectangle in Question no. 12 to rotate it by 30 degree anticlockwise about a fixed point (150,125) and see how the result is different from Question no. 12 by using opengl transformation methods.
18. Do the same thing 16 without using opengl transformation methods and see if the results are same.
19. Write an OPENGL app to illustrate orthogonal projection.
20. Write an OPENGL app to show clipping using orthogonal projection.
21. Write an OPENGL app to show rectangle in two different viewports.
22. Implement sutherland cohen clipping algorithm to clip the given line. The program must render the unclipped line first then after some time render the clipped view.