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/*                          Experiment No. 1
Roll No. : ITSA16
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*/

Program Code :

#include <math.h>
#include <GL/glut.h>
#include <GL/glu.h>
#include <GL/gl.h>

void Init1(){
 glClearColor(1,1,1,1);
 glColor3f(1.2,0.1,1.0);
 gluOrtho2D(0, 1280 , 0, 1024);
}

void basics(){
 glClear(GL_COLOR_BUFFER_BIT);
 glLineWidth(5);

 glBegin(GL_LINE_LOOP);
        glColor3f(1.2,0.1,1.0);
        glVertex2i(10,200);
        glVertex2i(10,900);
        glVertex2i(210,900);
        glVertex2i(210,500);
        glVertex2i(60,500);
        glVertex2i(60,200);
    glEnd();

    glBegin(GL_LINE_LOOP);
        glVertex2i(60,500);
        glVertex2i(150,200);
        glVertex2i(200,200);
        glVertex2i(110,500);
    glEnd();

    glBegin(GL_LINE_LOOP);
     glVertex2i(60,600);
     glVertex2i(60,800);
     glVertex2i(160,800);
     glVertex2i(160,600);
    glEnd();

// Shadow
    glLineWidth(2);
    glBegin(GL_POLYGON);
     glColor3f(0,0,0);
     glVertex2i(210,900);
```

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      glVertex2i(250,830);
      glVertex2i(250,430);
      glVertex2i(210,500);
    glEnd();

    glBegin(GL_POLYGON);
      glColor3f(0,0,0);
      glVertex2i(100,130);
      glVertex2i(100,375);
      glVertex2i(60,500);
      glVertex2i(60,200);
    glEnd();

    glBegin(GL_POLYGON);
      glColor3f(0,0,0);
      glVertex2i(10,200);
      glVertex2i(50,130);
      glVertex2i(100,130);
      glVertex2i(60,200);
    glEnd();

     glBegin(GL_POLYGON);
      glColor3f(0,0,0);
      glVertex2i(150,200);
      glVertex2i(190,130);
      glVertex2i(240,130);
      glVertex2i(200,200);
    glEnd();

     glBegin(GL_POLYGON);
      glColor3f(0,0,0);
      glVertex2i(240,130);
      glVertex2i(160,430);
      glVertex2i(110,500);
      glVertex2i(200,200);
    glEnd();

    glBegin(GL_POLYGON);
      glColor3f(0,0,0);
      glVertex2i(110,500);
      glVertex2i(210,500);
      glVertex2i(250,430);
      glVertex2i(160,430);
    glEnd();

    glBegin(GL_POLYGON);
      glColor3f(0,0,0);
      glVertex2i(60,800);
      glVertex2i(60,600);
      glVertex2i(110,600);
      glVertex2i(110,750);
```

```
        glEnd();

        glBegin(GL_POLYGON);
         // shadow of line  10
         glColor3f(0,0,0);
         glVertex2i(60,800);
         glVertex2i(160,800);
         glVertex2i(160,750);
         glVertex2i(110,750);
        glEnd();

  glFlush();
}


int main(int argc, char **argv){
 glutInit(&argc,argv);
   glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
 glutCreateWindow("Basics of OPENGL");
 glutInitWindowSize(1280,1024);
   glutInitWindowPosition(100,100);
   Init1();
   glutDisplayFunc(basics);


   glutMainLoop();
 return 0;
}
```