```
#include <GL/gl.h>
#include <GL/glut.h>
#include<bits/stdc++.h>

static float tx = 0.0;
static float ty = 0.0;
float angle = 0.0;

void circle(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{

   glBegin(GL_TRIANGLE_FAN);
   //glColor3f(1.0f, 0.0f, 0.0f);
   glVertex2f(cx, cy);

   for (int i = 0;i <= 100;i++)
   {
      float angle = 2.0f * 3.1416f * i / 100;

      float x = rx * cosf(angle);
      float y = ry * sinf(angle);

      glVertex2f((x + cx), (y + cy));
   }
   glEnd();

}

void display(void)
```

```
{
   /* clear all pixels */
   glClear(GL_COLOR_BUFFER_BIT);



   glColor3f(0.0f, 0.6f, 0.2f);
   glRectf(-50, 30, 50, -30);

   glBegin(GL_POLYGON);
   glColor4f(1.0f, 1.0f, 0.0f, 0.0f);
   glVertex2d(-30, 0);
   glVertex2d(0, 20);
   glVertex2d(30, 0);
   glVertex2d(0, -20);
   glEnd();

   glColor3f(0.1f, 0.1f, 0.4f);
   circle(10, 10, 0, 0);
   glColor4f(1.0f, 1.0f, 1.0f, 0.0f);
   circle(10, 5, 0, 0);
   glColor3f(0.1f, 0.1f, 0.4f);
   circle(10, 5, 0, -2);



   glFlush();
}
void init(void)
{
   /* select clearing (background) color */
```

```
    glClearColor(0.0, 0.0, 0.0, 0.0);
    /* initialize viewing values */
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();
    glOrtho(-100.0, 100.0, -100.0, 100.0, -10.0, 10.0);
    //-x,x,-y,y
}
/*
* Declare initial window size, position, and display mode
* (single buffer and RGBA). Open window with "hello"
* in its title bar. Call initialization routines.
* Register callback function to display graphics.
* Enter main loop and process events.
*/
int main(int argc, char** argv)
{
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
    glutInitWindowSize(600, 600);
    glutInitWindowPosition(100, 100);
    glutCreateWindow("Tuaha is a good boy");
    init();
    glutDisplayFunc(display);
    glutMainLoop();
    return 0; /* ISO C requires main to return int. */
}
```