Lab Report

Course Title: Computer Graphics Lab

Course Code: CSE422

Name of the Report: Draw an emoji

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Date of Submission: 11/13/2022

Code:

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

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

   glBegin(GL_TRIANGLE_FAN);
   glColor3f(1.0f, 1.0f, 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 circle1(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{

   glBegin(GL_TRIANGLE_FAN);
   glColor3f(1.0f, 1.0f, 1.0f);
   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();




}
//////////////// eye2
void circle2(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{

    glBegin(GL_TRIANGLE_FAN);
    glColor3f(1.0f, 1.0f, 1.0f);
    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();
```

```
}

//ball1
void ball1(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{

   glBegin(GL_TRIANGLE_FAN);
   glColor3f(0.0f, 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();



}
//////////////// ball2
void ball2(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{

   glBegin(GL_TRIANGLE_FAN);
   glColor3f(0.0f, 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, 0.0f, 1.0f);

    circle(5, 5, 0, 0);
    circle1(0.8, 0.8, -2, 2);
    circle1(0.8, 0.8, 2, 2);
    ball1(0.2, 0.2, 2, 2);
    ball2(0.2, 0.2, -2, 2);

    glColor3f (0.1, 0.0, 0.0);
            glBegin(GL_POLYGON);

            glVertex2f(-1.0f, -0.1f );
    glVertex2f(-1.0f, -0.6f );
```

```
    glVertex2f(1.0f, -0.6f );
     glVertex2f(1.0f, -0.1f );


   glEnd();


    glFlush();
}
void init(void)
{

    glClearColor(0.0, 0.0, 0.0, 0.0);
    glColor3f(0.0f, 0.0f, 1.0f);
    //glColor3f(0.0f, 0.0f, 0.0f);
    glMatrixMode(GL_PROJECTION);
    glLoadIdentity();
    glOrtho(-15, 15, -15, 15, -15, 15);
}

int main(int argc, char** argv)
{
    glutInit(&argc, argv);
    glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
    glutInitWindowSize(600, 600);
    glutInitWindowPosition(100, 100);
    glutCreateWindow("Circle 192-15-13126");
    init();
    glutDisplayFunc(display);
    glutMainLoop();
    return 0; /* ISO C requires main to return int. */
}
```

Output: