```
#include <GL/gl.h>
#include <GL/glut.h>
#include<bits/stdc++.h>
float p = -20;
float sk = -120;
bool flag = true;
bool fla = true;
void circle(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{
glBegin(GL_TRIANGLE_FAN);
glColor3f(0.0f, 0.9f, 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();
}

void sun(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{
glBegin(GL_TRIANGLE_FAN);
glColor3f(0.6f, 0.6f, 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 cloud(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{
glBegin(GL_TRIANGLE_FAN);
glColor3f(1.0,1.0,1.0);
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 leaves1(GLfloat rx, GLfloat ry, GLfloat cx, GLfloat cy)
{
glBegin(GL_TRIANGLE_FAN);
```

```
glColor3f(0.0f, 1.0f, 0.3f);
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)//////////////////////////////////////////////////////////display function/////////
{
/* clear all pixels */
glClear(GL_COLOR_BUFFER_BIT);
if (p > 12)flag = !flag;
 if (p <= -75) flag = !flag;
 if (flag)p += 0.01;
 else p -= 0.01;
 glutPostRedisplay();



if(sk<=160)
{
   sk=sk+.005;
}
else{
   sk=-120;
```

```
}



//////////////////////////////////////------sky----------
glBegin(GL_POLYGON);

glColor3f(0.5,1,1);

glVertex2f(-100.0f, 0.0f );//0
glVertex2f(100.0f, 0.0f );//20
glVertex2f(100.0f, 100.0f );//2
glVertex2f(-100.0f, 100.0f );//20
glEnd();

//////////////////////////////////----------sun----------
sun(15,24,10,0);

//////////////////////////////////------field----------
glBegin(GL_POLYGON);/////////mountain1

glColor3f(.3,1.0,0.6);

glVertex2f(-40.0f, 0.0f );//0
glVertex2f(100.0f, 0.0f );//20
glVertex2f(100.0f, -100.0f );//2
glVertex2f(-40.0f, -100.0f );//20
glEnd();
```

```
//////////////////////////----------cloud-1---------/////////////

cloud(5,7,sk-36,67);
cloud(5,7,sk-36,60);

cloud(5,7,sk-28,67);
cloud(5,7,sk-28,60);
cloud(5,7,sk-21,67);
cloud(5,7,sk-21,60);

//////////////////////////----------cloud-2---------/////////////

cloud(5,7,sk+5,67);
cloud(5,7,sk+5,60);

cloud(5,7,sk+14,67);
cloud(5,7,sk+14,60);
cloud(5,7,sk+21,67);
cloud(5,7,sk+21,60);

//////////////// circle/////////
//circle(50, 70, -50, -50);
//circle(50, 70, -50, -60);
//circle(50, 70, -50, -70);
```

```
circle(70, 50, -59, -40);
circle(70, 50, -57, -50);
circle(70, 67, -51, -60);//
circle(70, 50, -49, -65);
circle(70, 50, -48, -70);
circle(70, 50, -47, -75);
circle(70, 50, -46, -80);
circle(70, 50, -45, -85);
circle(70, 50, -44, -90);
circle(70, 50, -43, -95);
circle(70, 50, -45, -90);
circle(70, 50, -43, -95);
circle(70, 50, -42, -100);
leaves1(20, 10, 60, 33);//rx,ry,cx,cy
leaves1(10, 15, 60, 33);//rx,ry,cx,cy
leaves1(11, 11, 50, 33);//rx,ry,cx,cy
leaves1(11, 11, 70, 33);//rx,ry,cx,cy

////////////////////////////////////------hill----------
glBegin(GL_POLYGON);/////////mountain1

glColor3f(0,1,0.0);

glVertex2f(-100.0f, 0.0f );//0
glVertex2f(-80.0f, 40.0f );//20
glVertex2f(-78.0f, 40.0f );//2
glVertex2f(-60.0f, 0.0f );//20
glEnd();
glBegin(GL_POLYGON);/////////mountain2
```

```
glColor3f(0,1,0.0);

glVertex2f(-80.0f, 0.0f );
glVertex2f(-60.0f, 40.0f );
glVertex2f(-58.0f, 40.0f );
glVertex2f(-40.0f, 0.0f );
glEnd();
glBegin(GL_POLYGON);/////////mountain3

glColor3f(0,1,0.0);

glVertex2f(-60.0f, 0.0f );//0
glVertex2f(-40.0f, 40.0f );//20
glVertex2f(-38.0f, 40.0f );//2
glVertex2f(-20.0f, 0.0f );//20
glEnd();
glBegin(GL_POLYGON);/////////mountain4

glColor3f(0,1,0.0);

glVertex2f(-100.0f, 0.0f );
glVertex2f(-80.0f, 40.0f );
glVertex2f(-78.0f, 40.0f );
glVertex2f(-60.0f, 0.0f );
glEnd();
////////////////////////////////
////////////////////////////////----------house 1----------
glBegin(GL_POLYGON);
```

```
glColor3f(1,1,0.7);

glVertex2f(50.0f, 0.0f );
glVertex2f(50.0f, 7.0f );
glVertex2f(70.0f, 7.0f );
glVertex2f(70.0f, 0.0f );
glEnd();
////////////////////////////////
glBegin(GL_POLYGON);

glColor3f(1,1,0.4);

glVertex2f(70.0f, 7.0f );
glVertex2f(75.0f, 10.5f );
glVertex2f(80.0f, 7.0f );
glVertex2f(80.0f, 0.0f );
glVertex2f(70.0f, 0.0f );
glEnd();

////////////////////////////////
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);

glVertex2f(50.0f, 10.5f );
glVertex2f(75.0f, 10.50f );
glVertex2f(70.0f, 7.0f );
glVertex2f(50.0f, 7.0f );
```

```
glEnd();

////////////////////////////////window1
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);

glVertex2f(74.0f, 3.0f );
glVertex2f(74.0f, 6.0f );
glVertex2f(77.0f, 6.0f );
glVertex2f(77.0f, 3.0f );

glEnd();
////////////////////////////////window2
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);

glVertex2f(54.0f, 2.0f );
glVertex2f(54.0f, 5.0f );
glVertex2f(57.0f, 5.0f );
glVertex2f(57.0f, 2.0f );

glEnd();
////////////////////////////////window3
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);
```

```
glVertex2f(64.0f, 2.0f );
glVertex2f(64.0f, 5.0f );
glVertex2f(67.0f, 5.0f );
glVertex2f(67.0f, 2.0f );

glEnd();

//////////////////////////////////
//////////////////////////////////
//////////////////////////////////----------house 2----------

//house two
glBegin(GL_POLYGON);

glColor3f(1,1,0.7);



glVertex2f(20.0f, 0.0f );
glVertex2f(20.0f, 10.0f );
glVertex2f(25.0f, 15.0f );
glVertex2f(30.0f, 10.0f );
glVertex2f(30.0f, 0.0f );
glEnd();
//////////////////////////////////
glBegin(GL_POLYGON);
glColor3f (1.0, 0.9, 0.0);

glVertex2f(30.0f, 0.0f );
```

```
glVertex2f(30.0f, 10.0f );
glVertex2f(50.0f, 10.0f );
glVertex2f(50.0f, 0.0f );

glEnd();
////////////////////////////////
glBegin(GL_POLYGON);
glColor3f (1.0, 1.0, 0.8);

glVertex2f(25.0f, 15.0f );
glVertex2f(50.0f, 15.0f );
glVertex2f(53.0f, 10.0f );
glVertex2f(30.0f, 10.0f );

glEnd();
////////////////////////////////
glBegin(GL_POLYGON);
glColor3f(.9,0.7,0.3);

glVertex2f(19.0f, 10.0f );
glVertex2f(25.0f, 15.0f );
glVertex2f(31.0f, 10.0f );
glVertex2f(30.0f, 10.0f );
glVertex2f(25.0f, 15.0f );
glVertex2f(20.0f, 10.0f );

glEnd();

////////////////////////////////window1
```

```
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);

glVertex2f(23.0f, 4.0f );
glVertex2f(23.0f, 7.0f );
glVertex2f(27.0f, 7.0f );
glVertex2f(27.0f, 4.0f );

glEnd();

//////////////////////////////////window2
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);

glVertex2f(33.0f, 4.0f );
glVertex2f(33.0f, 7.0f );
glVertex2f(37.0f, 7.0f );
glVertex2f(37.0f, 4.0f );

glEnd();

//////////////////////////////////door
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);

glVertex2f(38.0f, 0.0f );
```

```
glVertex2f(38.0f, 8.0f );
glVertex2f(42.0f, 8.0f );
glVertex2f(42.0f, 0.0f );

glEnd();

////////////////////////////////window3
glBegin(GL_POLYGON);

glColor3f(1,0,0.4);



glVertex2f(43.0f, 4.0f );
glVertex2f(43.0f, 7.0f );
glVertex2f(47.0f, 7.0f );
glVertex2f(47.0f, 4.0f );

glEnd();
////////////////////////////////tree body
glBegin(GL_POLYGON);

glColor3f(0.5,0.5,0.4);

glVertex2f(60.0f, 10.50f );
glVertex2f(60.0f, 25.0f );
glVertex2f(63.0f, 25.0f );
glVertex2f(63.0f, 10.50f );
glEnd();
////////////////////////////////treedd1
```

```
glBegin(GL_POLYGON);

glColor3f(0.5,0.5,0.4);

glVertex2f(60.0f, 25.0f );
glVertex2f(50.0f, 35.0f );
glVertex2f(52.0f, 35.0f );
glVertex2f(62.0f, 25.0f );
glEnd();
//////////////////////////////////treedd2
glBegin(GL_POLYGON);

glColor3f(0.5,0.5,0.4);

glVertex2f(62.0f, 25.0f );
glVertex2f(70.0f, 35.0f );
glVertex2f(72.0f, 35.0f );
glVertex2f(63.0f, 25.0f );
glEnd();

//////////////////////////////////////----------road-------------------------
glBegin(GL_POLYGON);/////1

glColor3f(1.0,0.9,0.4);

glVertex2f(38.0f, 0.0f );
glVertex2f(42.0f, 0.0f );
glVertex2f(62.0f, -22.0f );//
glVertex2f(50.0f, -20.0f );
```

```
glVertex2f(38.0f, 0.0f );
glEnd();

//////////////////////////
glBegin(GL_POLYGON);/////////2

glColor3f(1.0,0.9,0.4);

glVertex2f(62.0f, -22.0f );
glVertex2f(40.0f, -40.0f );
glVertex2f(23.0f, -40.0f );//
glVertex2f(50.0f, -20.0f );
//glVertex2f(38.0f, 0.0f );
glEnd();
glBegin(GL_POLYGON);/////////3

glColor3f(1.0,0.9,0.4);

glVertex2f(40.0f, -40.0f );
glVertex2f(100.0f, -80.0f );
glVertex2f(100.0f, -100.0f );//
glVertex2f(23.0f, -40.0f );
glEnd();
////////////////////////////////////----------boat-------------------------
glBegin(GL_POLYGON);/////1

glColor3f(1.0,0.9,0.4);

glVertex2f(p-25.0f, -50.0f );
```

```
glVertex2f(p+15.0f, -50.0f );
glVertex2f(p+7.0f, -60.0f );//
glVertex2f(p-17.0f, -60.0f );
glVertex2f(p-25.0f, -50.0f );
glEnd();


////////////////////////////
glBegin(GL_POLYGON);/////red

glColor3f(1.0,0.0,0.0);


glVertex2f(p+6.0f, -50.0f );
glVertex2f(p+6.0f, -40.0f );
glVertex2f(p-15.0f, -40.0f );
glVertex2f(p-15.0f, -50.0f );
glEnd();


//rx,ry,cx,cy
glFlush();
}
void init(void)
{
glClearColor(0.0, 0.0, 0.0, 0.0);
glMatrixMode(GL_PROJECTION);
glLoadIdentity();
glOrtho(-100, 100, -100, 100, -15, 15);
```

```
//-x,x,-y,y
}
int main(int argc, char** argv)
{
glutInit(&argc, argv);
glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);

glutInitWindowSize (1000, 600);
glutInitWindowPosition (100, 100);
glutCreateWindow("Likhon_project");
init();
glutDisplayFunc(display);
glutMainLoop();
return 0; /* ISO C requires main to return int. */
}
```