```
#include<iostream>
#include<math.h>
#include<GL/glut.h>
using namespace std;
int xc = 320, yc = 240;

void plot_point(int x, int y)
{
	glBegin(GL_POINTS);
	glVertex2i(xc+x, yc+y);
	glVertex2i(xc+x, yc-y);
	glVertex2i(xc+y, yc+x);
	glVertex2i(xc+y, yc-x);
	glVertex2i(xc-x, yc-y);
	glVertex2i(xc-y, yc-x);
	glVertex2i(xc-x, yc+y);
	glVertex2i(xc-y, yc+x);
	glEnd();
}
void bresenham_circle(int r)
{
	int x=0,y=r;
	float d=3-2*r;
	plot_point(x,y);
	int k;
	while(x < y)
	{
		x = x + 1;
		if(d < 0)
			d=d+4*x+6;
		else
		{
			y = y - 1;
			d=d+4*(x-y)+10;
		}
```

```
            plot_point(x,y);
        }
        glFlush();
}

void display()
{
        int radius1=50;
        glClear(GL_COLOR_BUFFER_BIT);
        bresenham_circle(radius1);
}

void Init()
{
        /* Set clear color to white */
        glClearColor(1.0,1.0,1.0,0);
        /* Set fill color to black */
        glColor3f(0.0,0.0,0.0);
        gluOrtho2D(0 , 640 , 0 , 480);
}

int main(int argc, char **argv)
{
        glutInit(&argc,argv);
        glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
        glutInitWindowPosition(0,0);
        glutInitWindowSize(640,480);
        glutCreateWindow("bresenham_circle");
        Init();
        glutDisplayFunc(display);
        glutMainLoop();
}
```