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

int r,xc,yc,x,y;

void CircleBA(int r, int xc, int yc, int x, int y)
{
int d = 3-2*r;
x=0;
y=r;

glBegin(GL_POINTS);
glVertex2d(x,y);

do
{
glVertex2d(xc+x,yc+y);
glVertex2d(xc-x,yc+y);
glVertex2d(xc-x,yc-y);
glVertex2d(xc+x,yc-y);
glVertex2d(xc+x,yc+y);
glVertex2d(xc-x,yc+y);
glVertex2d(xc-x,yc-y);
glVertex2d(xc+x,yc-y);

if(d<0)
{
d=d+4*x+6;
}
else
{
d=d+4*(x-y)+10;
y=y-1;
}
x=x+1;
}while(x<=y);

 glVertex2d(x,y);

 glEnd();
 glFlush();
}

void display()
{
CircleBA(r,xc,yc,x,y);
```

```
}
void Init()
{
glClearColor(1.0,1.0,1.0,0);
glColor3f(1.0,0.0,0.0);
glClear(GL_COLOR_BUFFER_BIT);
gluOrtho2D(0,640,0,480);
}

void main(int argc, char **argv)
{
printf("/n Enter radius of circle: ");
scanf("%d",&r);
printf("/n Enter xc: ");
scanf("%d",&xc);
printf("/n Enter yc: ");
scanf("%d",&yc);

glutInit(&argc,argv);
glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);
glutInitWindowPosition(0,0);
glutInitWindowSize(640,480);
glutCreateWindow("BA_CIRCLE");

Init();
glutDisplayFunc(display);
glutMainLoop();
}
```