#include <graphics.h>

#include <stdlib.h>

#include <iostream>

#include <math.h>

using namespace std;

void EightWaySymmetricPlot(int xc,int yc,int x,int y)

{

putpixel(x+xc,y+yc,1);

putpixel(y+xc,x+yc,5);

putpixel(x+xc,-y+yc,2);

putpixel(y+xc,-x+yc,6);

putpixel(-x+xc,-y+yc,3);

putpixel(-y+xc,-x+yc,7);

putpixel(-x+xc,y+yc,4);

putpixel(-y+xc,x+yc,8);

delay(1000);

}

void BresenhamCircle(int xc,int yc,int r)

{

int x = 0,y = r, d;

d = 3 -(2\*r);

EightWaySymmetricPlot(xc,yc,x,y);

while(x<=y)

{

if(d <= 0)

{

d = d + (4\*x) + 6;

}

else

{

d = d + (4\*x) - (4\*y) + 10;

y = y - 1;

}

x = x + 1;

EightWaySymmetricPlot(xc,yc,x,y);

}

}

int main()

{

/\* request auto detection \*/

int xc,yc,r,gdriver = DETECT, gmode;

/\* initialize graphics and local variables \*/

initgraph(&gdriver, &gmode, NULL);

cout<<"Enter the values of xc and yc :";

cin>>xc>>yc;

cout<<"Enter the value of radius :";

cin>>r;

BresenhamCircle(xc,yc,r);

getch();

closegraph();

return 0;

}