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 /***   Program to Draw a Circle using Bresenham's Algorithm   ***/

#include <stdio.h>
#include <dos.h>
#include <graphics.h>

void circleBres(int, int, int);
void drawCircle(int, int, int, int);

void main()
{
     int xc, yc, r;

     int gd = DETECT, gm;
     initgraph(&gd, &gm, "");

     printf("Enter center coordinates of circle: ");
     scanf("%d %d", &xc, &yc);
     printf("Enter radius of circle: ");
     scanf("%d", &r);

     circleBres(xc, yc, r);

     getch();
}

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

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

            drawCircle(xc, yc, x, y);
            delay(50);
      }
}

void drawCircle(int xc, int yc, int x, int y)
{
      putpixel(xc+x, yc+y, RED);
      putpixel(xc-x, yc+y, RED);
      putpixel(xc+x, yc-y, RED);
      putpixel(xc-x, yc-y, RED);
      putpixel(xc+y, yc+x, RED);
      putpixel(xc-y, yc+x, RED);
      putpixel(xc+y, yc-x, RED);
      putpixel(xc-y, yc-x, RED);
}
```