**Program 8**

**Write a program to draw a circular arc.**

#include<stdio.h>

#include<graphics.h>

#include<math.h>

#define ROUND(a) ((int)(a+0.5))

void arccircle(int xc,int yc, int r,float a1,float a2)

{

int x = ROUND(r\*cos(a2));

int y = ROUND(r\*sin(a2));

int xf = ROUND(r\*cos(a1));

int yf = ROUND(r\*sin(a1));

int p=5/4-r;

putpixel(xc+x,yc+y,15);

while(x<=xf && y>=yf)

{

if(x<y)

{

x++;

if(p<0)

p+= 2\*x+1;

else

{

y--;

p+=2\*(x-y)+1;

}

putpixel(xc+x,yc+y,15);

}

else

{

y--;

if(p>0)

p-= 2\*y +1;

else

{

x++;

p-=2\*(y-x)+1;

}

putpixel(xc+x,yc+y,15);

}

}

}

int main()

{

int xc,yc,r;

float a1,a2;

int gdriver = DETECT, gmode, errorcode;

initgraph(&gdriver, &gmode, "..\\");

errorcode = graphresult();

if (errorcode != grOk)

{

printf("Graphics error: %s\n", grapherrormsg(errorcode));

printf("Press any key to halt:");

getch();

exit(1);

}

printf("Enter center of circle\n");

scanf("%d %d", &xc, &yc);

printf("Enter radius\n");

scanf("%d", &r);

printf("Enter the start and end angles with x-axis\n");

scanf("%f%f",&a1,&a2);

a1=a1\*3.142/180;

a2=a2\*3.142/180;

arccircle(xc,yc,r,a1,a2);

getch();

closegraph();

return 0;

}



