**Computer Graphics LAB**

**(**Experiment 7**)**

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* Bresenham Circle Drawing Algorithm Implementation using C Programming Language.

**CODE :**

#include<conio.h>

#include<graphics.h>

#include<stdio.h>

void DrawCircle(int x, int y, int xc, int yc);

int main(){

int gd = DETECT, gm;

int r, xc, yc, dp, x, y;

initgraph(&gd, &gm, "c:\\tc\\bgi");

printf("Enter the center co-ordinate --> \n");

scanf("%d", &xc);

scanf("%d", &yc);

printf("Enter the radius of the circle --> \n");

scanf("%d", &r);

dp = 3 - 2\*r;

x = 0;

y = r;

DrawCircle(x,y,xc,yc);

while(x < y){

if(dp <= 0){

dp = dp + 4\*x + 6;

DrawCircle(++x, y, xc, yc);

}

else{

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

DrawCircle(++x, --y, xc, yc);

}

}

getch();

closegraph();

}

void DrawCircle(int x, int y, int xc, int yc){

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);

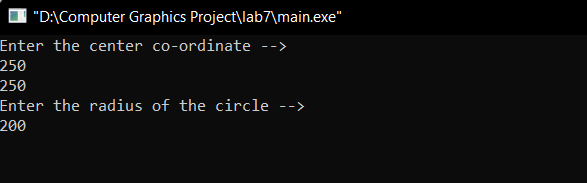
putpixel(xc+y, yc-x, RED);

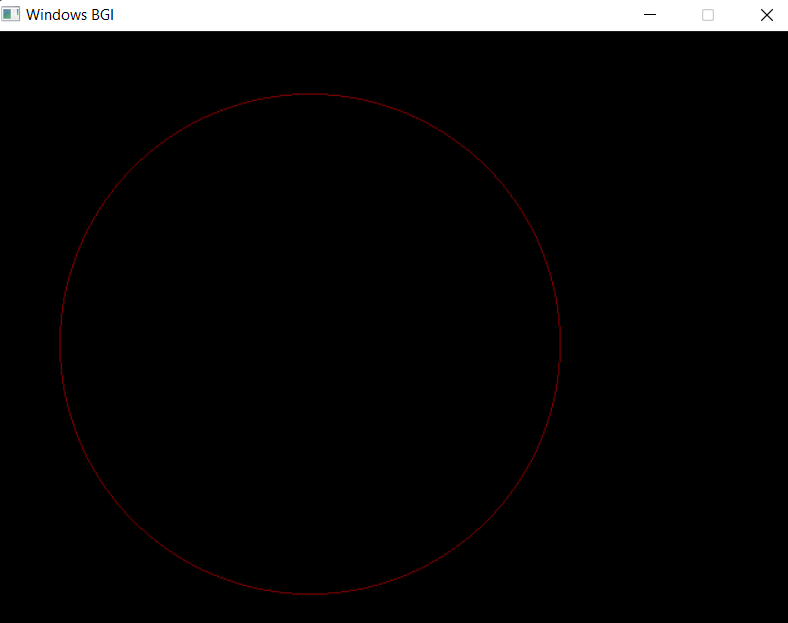
putpixel(xc-y, yc+x, RED);

putpixel(xc-y, yc-x, RED);

}

**OUTPUT :**

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