**Practical Question 2**

**Write a program to implement mid-point circle drawing algorithm.**

#include<iostream>

#include <conio.h>

#include <graphics.h>

#include <cmath>

using namespace std;

int main()

{

int x,y;

int Pk;

int r;

int xc,yc; //Centre of the circle

cout<<"Enter coordinates of centre"<<endl;

cout<<"X=";cin>>xc;

cout<<"Y=";cin>>yc;

cout<<"Enter radius: ";cin>>r;

initwindow(1024,720,"Mid Point Circle");

int pk=1-r;

x=0;

y=r;

while(x<=y)

{

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

cout<<"("<<x+xc<<","<<y+yc<<")"<<endl;

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

cout<<"("<<-x+xc<<","<<y+yc<<")"<<endl;

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

cout<<"("<<x+xc<<","<<-y+yc<<")"<<endl;

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

cout<<"("<<-x+xc<<","<<-y+yc<<")"<<endl;

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

cout<<"("<<y+xc<<","<<x+yc<<")"<<endl;

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

cout<<"("<<-y+xc<<","<<x+yc<<")"<<endl;

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

cout<<"("<<y+xc<<","<<-x+yc<<")"<<endl;

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

cout<<"("<<-y+xc<<","<<-x+yc<<")"<<endl;

++x;

if(pk<0)

pk=pk+(2\*x)+1;

else

{

--y;

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

}

delay(30);

}

getch();

closegraph();

return 0;

}

**OUTPUT:**



