

## MIDPOINT CIRCLE ALGORITHM

```
#include<stdio.h>

#include<conio.h>

#include<graphics.h>

void pixel(int x,int y,int xc,int yc)
{
    putpixel(x+xc,y+yc,BLUE);
    putpixel(x+xc,-y+yc,BLUE);
    putpixel(-x+xc,y+yc,BLUE);
    putpixel(-x+xc,-y+yc,BLUE);
    putpixel(y+xc,x+yc,BLUE);
    putpixel(y+xc,-x+yc,BLUE);
    putpixel(-y+xc,x+yc,BLUE);
    putpixel(-y+xc,-x+yc,BLUE);
}

main()
{
    int gd=DETECT,gm=0,r,xc,yc,x,y;
    float p;
    //detectgraph(&gd,&gm);
    initgraph(&gd,&gm," ");
    printf("\n Enter the radius of the circle:");
    scanf("%d",&r);
    printf("\n Enter the center of the circle:");
    scanf("%d %d",&xc,&yc);
```

```
y=r;
x=0;
p=(5/4)-r;
while(x<y)
{
    if(p<0)
    {
        x=x+1;

        y=y;

        p=p+2*x+3;
    }
    else
    {
        x=x+1;

        y=y-1;

        p=p+2*x-2*y+5;
    }

    pixel(x,y,xc,yc);
}
getch();
closegraph();
}
```

Enter the radius of the circle:100

Enter the center of the circle:200  
250

