

## DRAW CIRCLE USING DIRECT ALGORITHM

```
#include<graphics.h>
#include<iostream.h>
#include<stdio.h>
#include<conio.h>
void main()
{
    int gd=DETECT, gm;
    float x1,x2,y1,y2,x,y,m,c,dx,dy,clr;
    initgraph(&gd,&gm," ");
    cout<<"enter the value of x1,y1,x2,y2 and color";
    cin>>x1>>y1>>x2>>y2>>clr;
    x=x1;
    y=y1;
    dx=x2-x1;
    dy=y2-y1;
    m=dy/dx;
    c=y-m*x;
    if(dx==0)
    {
        for(;y<=y2;y++)
        {
            x=x1;
            putpixel(x,y,clr);
        }
    }
}
```

```
else if(dy==0)
{
    for(;x<=x2;x++)
    {
        y=y1;
        putpixel(x,y,clr);
    }
}else
{
    m=dy/dx;
    if(m<1)
    {
        for(;x<=x2;x++)
        {
            y=m*x+ c;
            putpixel(x,y,clr);
        }
    }
    else if(m==1)
    {
        for(;x<=x2;x++)
        {
            y=y+1;
            putpixel(x,y,clr);
        }
    }
}
```

```
else
{
    for(;y<=y2;y++)
    {
        x=(y-c)/m;
        putpixel(x,y,clr);
    }
}
getch();
closegraph();
}
```