

```
1 //CG Exp 6: Midpoint Circle Generation
2 //SE3_41_C : Kunal Patil
3
4 #include<graphics.h>
5 #include<conio.h>
6 #include<stdio.h>
7
8 int main()
9 {
10     int x,y,x_mid,y_mid,radius,dp;
11     int g_mode,g_driver=DETECT;
12     initgraph(&g_driver,&g_mode," ");
13     printf("Enter the coordinates: ");
14     scanf("%d %d",&x_mid,&y_mid);
15     printf("Enter the radius =");
16     scanf("%d",&radius);
17     x=0;
18     y=radius;
19     dp=1-radius;
20
21     do {
22         printf("%d\t%d\t%d\n", dp, x, y);
23         delay(100);
24         putpixel(x_mid+x,y_mid+y,YELLOW);
25         putpixel(x_mid+y,y_mid+x,YELLOW);
26         putpixel(x_mid-y,y_mid+x,YELLOW);
27         putpixel(x_mid-x,y_mid+y,YELLOW);
28         putpixel(x_mid-x,y_mid-y,YELLOW);
29         putpixel(x_mid-y,y_mid-x,YELLOW);
30         putpixel(x_mid+y,y_mid-x,YELLOW);
31         putpixel(x_mid+x,y_mid-y,YELLOW);
32         if(dp<0) {
33             dp+=(2*x)+1;
34         } else {
35             y=y-1;
36             dp+=(2*x)-(2*y)+1;
37         }
38         x=x+1;
39     } while(y>x);
40
41     getch();
42     return 0;
43 }
```

Enter the coordinates: 320 240

Enter the radius: 25

DP	X	Y
-24	0	25
-23	1	25
-20	2	25
-15	3	25
-8	4	25
1	5	25
-36	6	24
-23	7	24
-8	8	24
9	9	24
-18	10	23
3	11	23
-18	12	22
7	13	22
-8	14	21
21	15	21
12	16	20
7	17	19

