Practical 8

Task 1 : Write a program to demonstrate Bresenham's mid point circle algorithm.

Source Code:

```
#include<graphics.h>
#include<stdio.h>
#include<math.h>
int main()
{
  int gd = DETECT,gm;
  float xa,ya,r;
  printf("Enter the Center of circle\n");
  scanf("%f %f",&xa,&ya);
  printf("Enter the Radius of circle\n");
  scanf("%f",&r);
  initgraph(&gd,&gm,NULL);
  float pk = (5/4)-r;
  float x = 0,y=r;
  while(y>=x)
  {
   putpixel(x+xa,y+ya,WHITE);
   putpixel(y+xa,x+ya,WHITE);
   putpixel(x+xa,-(y)+ya,WHITE);
   putpixel(y+xa,-(x)+ya,WHITE);
   putpixel(-(x)+xa,y+ya,WHITE);
   putpixel(-(y)+xa,x+ya,WHITE);
   putpixel(-(x)+xa,-(y)+ya,WHITE);
   putpixel(-(y)+xa,-(x)+ya,WHITE);
   if(pk<0)
   {
    x+=1;
    pk=pk+2*x+1;
   }
   else
   {
    x+=1;
    y-=1;
    pk=pk+2*x+1-2*y;
   }
  }
```

```
    delay(5000);
    closegraph();
    return 0;
}
```

Output:

```
adnrs96@aditya-hp-envy-15-notebook-pc:/media/adnrs96/Local Disk/Local Disk(G)/CG
$ ./a.out
Enter the Center of circle
200
200
Enter the Radius of circle
70
```