Name: Vineet Pal   Roll No: 1121167   Course: BCA VI

Ans2)

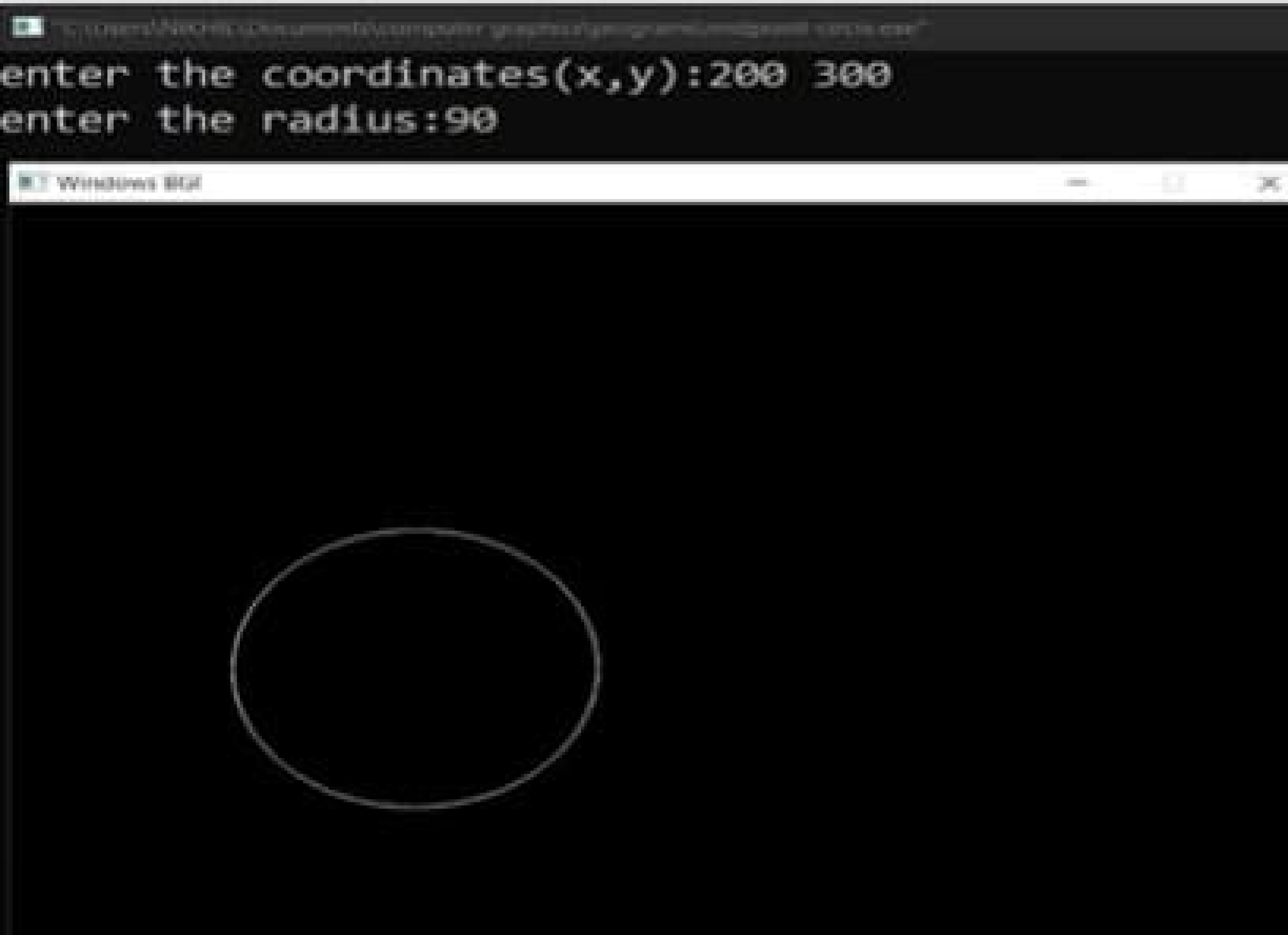
Mid Point Circle Algorithm

```
Step1) Put $x=0$, $y=r$ in equation second
         We have $p=1-r$
Step2) Repeat step while $x \le y$
            plot $(x,y)$
            if $(p<0)$
      then set $p=p+2x+3$
       else
            $p=p+2(x-y)+5$
             $y=y-1$ (end if)
             $y=x+1$ (end loop)

Step3) End
```

Ans)

```
# include < graphics.h>
# include < stdio.h>
Void midpoint ( int midx, int midy, int r)
{
     int x=0 , y=r, gd=0, gm, di, dnext;
          init graph (&gd , &gm, " ");
   di=1.25-r;
    while (x<=y)
    {
        if (di>=0)
    {
    dnext = di+2* (x-y)+1;
           x++;   y--;   }
     else
     {
     dnext = di+2*x+1;
           x++;
               }
  putpixel (x+midx, y+midy ,5);
 putpixel (y+midx , x+midy ,5);
putpixel (-x+ midx , -y + midy , 5);
putpixel (-y+ midx , -x+midy ,5);
putpixel (-y+ midx, x + midy ,5);
putpixel (y+ midx, -x+ midy, 5);
 putpixel (x+ midx) - y+ midy, 5);
 putpixel (-x+ midx , y+ midy ,5);
     di= dnext;
                    }
                  getch();
                        closegraph ();
                                           }
  int main ()
{
  int gd=0, gm;
 int midx=0, midy=0, r=0;
 printf ("enter the co-ordinates (x,y): ");
 scanf (" %d  %d ", &midx , & midy);
 printf (" enter the radius");
   scanf ("%d", &r);
   midpoint (midx, midy, r);
     return 0;
                 }
```



```
enter the coordinates(x,y):200 300
enter the radius:90
```