# PROGRAM FOR ELLIPSE

# NAME: - Mukul Dev

# REG NO.:-13BIT0269

# PROGRAM

#include<stdio.h>

#include<conio.h>

#include<graphics.h>

#include<math.h>

void disp();

float x,y;

int xc,yc;

main()

{

float p1,p2;

initwindow(400, 300, "First Sample");

printf("ELLIPSE\n");

printf("Enter the value of Centre(x)\t");

scanf("%d",&xc);

printf("Enter the value of centre(y)\t");

scanf("%d",&yc);

printf("Enter X axis length\t");

scanf("%d",&a);

printf("Enter Y axis length\t");

scanf("%d",&b);

x=0;y=b;

disp();

p1=(b\*b)-(a\*a\*b)+(a\*a)/4;

while((2.0\*b\*b\*x)<=(2.0\*a\*a\*y))

{

x++;

if(p1<=0)

p1=p1+(2.0\*b\*b\*x)+(b\*b);

else

{

y--;

p1=p1+(2.0\*b\*b\*x)+(b\*b)-(2.0\*a\*a\*y);

}

disp();

x=-x;

disp();

x=-x;

delay(50);

}

x=a;

y=0;

disp();

p2=(a\*a)+2.0\*(b\*b\*a)+(b\*b)/4;

while((2.0\*b\*b\*x)>(2.0\*a\*a\*y))

{

y++;

if(p2>0)

p2=p2+(a\*a)-(2.0\*a\*a\*y);

else

{

x--;

p2=p2+(2.0\*b\*b\*x)-(2.0\*a\*a\*y)+(a\*a);

}

disp();

y=-y;

disp();

y=-y;

delay(50);

}

getch();

closegraph();

}

void disp()

{

putpixel(xc+x,yc+y,9);

putpixel(xc-x,yc+y,9);

putpixel(xc+x,yc-y,9);

putpixel(xc+x,yc-y,9);

}

# OUTPUT SCREEN

# 