

NAME - BHARAT GURUNG

BCA - VII SEM, (A)

11210517, class roll- 34

Computer Graphics (practical)

*[Signature]*

Ans 1. #include <stdio.h>

#include <graphics.h>

int main()

{

int xoo( float num)

{

return num < 0 ? num - 0.5 : num + 0.5;

}

int x1 = 100, x2 = 250, y1 = 100, y2 = 250, step;

int gd = DETECT, gm;

float x, y, m;

int dx = x2 - x1;

int dy = y2 - y1;

m = dy/dx;

if (dx > dy)

step = dx;

else

step = dy;

initgraph (&gd, &gm, "");

outtextxy (x1, y1, "A");

outtextxy (x2, y2, "B");

putpixel (x1, y1, RED);



$x = x_1, y = y_1;$

while (step > 0)

{

if (m < 1)

{

$x = x + 1$

$y = y + m;$

}

if (m > -1)

{

$x = x + 1/m;$

$y = y + 1;$

}

putpixel (x, y, RED);

step--;

}

getch();

return 0;

}

→ start 4

Algorithm ; i) Declare  $x_1, y_1, x_2, y_2, dx, dy, x, y$  as integer variables.

ii) Enter value of  $x_1, y_1, x_2, y_2$ .

iii) Calculate  $dx = x_2 - x_1$

iv) Calculate  $dy = y_2 - y_1$

v) if  $ABS(dx) > ABS(dy)$



Then  $\text{step} = \text{abs}(dx)$   
else

vi)  $X_{inc} = dx / \text{step}$   
 $Y_{inc} = dy / \text{step}$   
assign  $X = X_1$   
assign  $Y = Y_1$

vii) Set pixel  $(X, Y)$

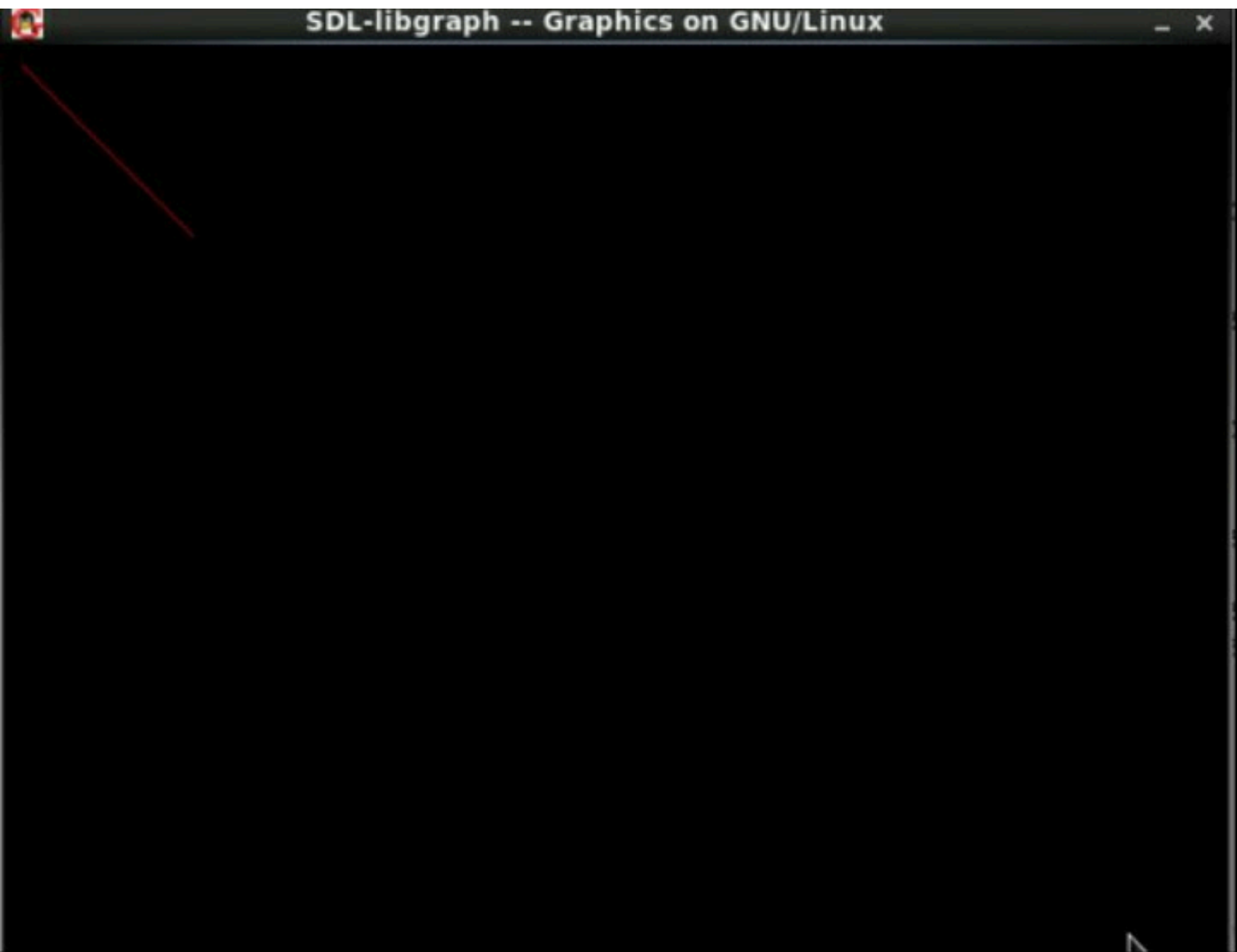
viii)  $X = X + X_{inc}$   
 $Y = Y + Y_{inc}$

set pixels  $(\text{Round}(X), \text{Round}(Y))$

ix) Repeat step (viii) until  $X = X_2$

x) End Algorithm

*Copywriting*





NAME - BHARAT GURUNG

BCA (A), VI<sup>th</sup> SEM

1121037, class roll - 34

*Bharat Gurung*

## COMPUTER GRAPHICS (PRACTICAL)

Ans:

```
#include <graphics.h>
#include <conio.h>
#include <dos.h>
#include <stdlib.h>

main()
{
    int gd = DETECT, gm, midx, midy;
    initgraph(&gd, &gm, "C:\\TC\\BGI");
    midx = getmaxx() / 2;
    midy = getmaxy() / 2;

    setcolor(RED);
    settextstyle(Script_FONT, HORIZ_DIR, 3);
    settextjustify(CENTER_TEXT, CENTER_TEXT);
    outtextxy(midx, midy - 10, "Traffic Light Animation");
    outtextxy(midx, midy + 10, "Press any key to start");

    getch();
    cleardevice();
    setcolor(WHITE);
    settextstyle(DEFAULT_FONT, HORIZ_DIR, 1);
    rectangle(midx - 80, midy - 80, midx + 80, midy + 80);
    circle(midx, midy - 50, 22);
    setcolor setfillstyle(SOLID_FILL, RED);
```



```

floodfill (midX, midY - 50, WHITE);
setcolor (BLUE);
outtextxy (midX, midY - 50, "STOP");
delay (2000);
graphdefaults ();
cleardevice ();
setcolor (WHITE);
rectangle (midX - 50, midY - 80, midX + 50, midY + 80);
set circle (midX, midY, 20);
setfillstyle (SOLID_FILL, YELLOW);
floodfill (midX, midY, WHITE);
setcolor (BLUE);
outtextxy (midX - 10, midY - 3, "READY");
delay (2000);
cleardevice ();
setcolor (WHITE);
rectangle (midX - 50, midY - 80, midX + 50, midY + 80);
circle (midX, midY + 50, 22);
setfillstyle (SOLID_FILL, GREEN);
floodfill (midX, midY + 50, WHITE);
setcolor (BLUE);
outtextxy (midX + 7, midY + 40, "GO");
setcolor (RED);
settextstyle (SCRIPT_FONT, HORIZ_DIR, 4);
outtextxy (midX - 150, midY + 100, "PRESS ANY KEY
TO EXIT.");

```

*Shrimay*



getch();

closegraph();

return 0;

*Gyurung*

}

