Name - Bhagirathi Danu
Course - BCA 6A
Roll No - 1121036
Subject - Computer Graphics & Animation

END-TERM

Q1

```
#include <stdio.h>
#include <graphics.h>
int main()
{
  int rou (float num)
    {
     return  num <0 ? num -0.5+num +0.5;
    }
  int x1= 100, x2=250, y1=100.y2 =250, steb;
  int gd= DETECT, gm;
  float x, y, m;
  int dx = x2- x1;
  int dy = y2- y1;
  m= dy/dx;
  if (dx > dy)
        steb =dx;
da
   steb =dy;
initgraph (&gd, &gm");
outextxy (x1, y1, "A");
outextxy (x2, y2, "B");
Putpixel (x1, y1, RED);
 x= x1, y=y1;
 while (steb>0)
   { if (m<1)
      { x=x+1;
      y= y+m
```

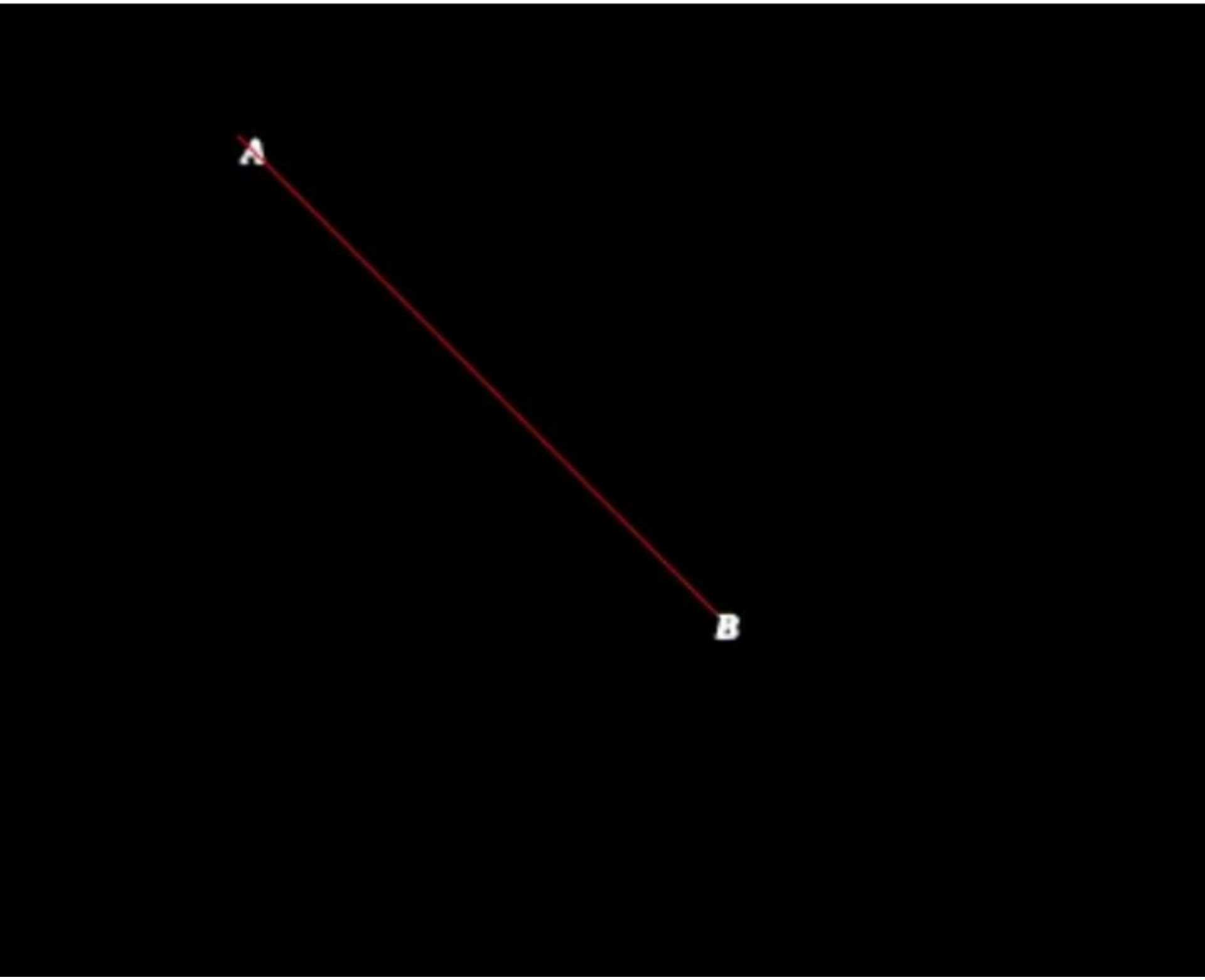
Bdanu

```
if (m >= 1)
  {
    x = x+1 /m;
    y = y+1;
  }
Putpixel (round(x), round(y), RED);
step--;
}
getch();
return 0;
}
```

Algorithm

Step1 - Start Algorithm
Step2 - Declare $x_1, y_1, x_2, y_2, dx, dy, x, y$ as integer variables
Step3 - Enter Value of x_1, y_1, x_2, y_2
Step4 - Calculate $dx = x_2 - x_1$
Step5 - Calculate $dy = y_2 - y_1$
Step6 : If ABS(dx) > ABS(dy) Then step = abs(dx)
Else
Step7 : xinc = dx / step
yinc = dy / step
assign x = x1
assign y = y1
step 8 - set pixel (x, y)
Step 9 : x = x + xinc
y = y + yinc
Set pixels (Round(x), Round(y))
Step 10 : Repeat step 9 until x = x2
Step 11 : End Algorithm

Bdarry



Q2 Traffic

```
#include (stdio.h)
#include <graphics.h>
int main()
{
    int gd = DETECT, gm;
    initgraph (&gd, &gm, "");
    line (0, 2000, getmaxx (), 200);
    line (0, 360, getmaxx (), 360);
    Set color (WHITE);
    rectangle (150, 210, 260, 250);
    floodfill (152, 220, WHITE);
    rectangle (150, 2410, 260, 260);
    floodfill (152, 241, WHITE);
    rectangle (150, 290, 260, 290);
    floodfill (152, 271, WHITE);
    Rectangle (150, 330, 260, 350);
    floodfill (152, 301, WHITE)
    Rectangle (150, 330 280, 350);
    floodfill (152, 331, WHITE);
    Set color (WHITE);
    rectangle (140, 220, 145, 130);
    rectangle (130, 80, 155, 70);
    setcolor (RED);
    circle (142, 82, 6);
    floodfill (142, 82, RED);
    Setcolor (YELLOW);
    circle (142, 100, 6);
    floodfill (142, 100, YELLOW);
    set color (GREEN);
    circle (142, 118, 6);
    floodfill (143, 118, GREEN);
    set color (WHITE);
    getch ();
    close graph ();
    return 0;
```

Bdanu