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//NAME :Ajay Kumar Panchal
//Roll No.=1900290149006
// C program for DDA line generation
#include<stdio.h>
#include<dos.h>
#include<conio.h>
#include<graphics.h>

//Function for finding absolute value
int abs (int n)
{
   return ( (n>0) ? n : ( n * (-1)));
}

//DDA Function for line generation
void DDA(int X0, int Y0, int X1, int Y1)
{
   // calculate dx & dy
   int dx = X1 - X0;
   int dy = Y1 - Y0;

   // calculate steps required for generating pixels
   int steps = abs(dx) > abs(dy) ? abs(dx) : abs(dy);

   // calculate increment in x & y for each steps
```

```
    float Xinc = dx / (float) steps;
    float Yinc = dy / (float) steps;

    // Put pixel for each step
    float X = X0;
    float Y = Y0;
    for (int i = 0; i <= steps; i++)
    {
            putpixel (X,Y,WHITE);  // put pixel at (X,Y)
            X += Xinc;          // increment in x at each step
            Y += Yinc;          // increment in y at each step
      delay(100);         // for visualization of line-
                                  // generation step by step
    }
}

// Driver program
int main()
{
    int gd = DETECT, gm;

    // Initialize graphics function
    initgraph(&gd, &gm, "C:\\TURBOC3\\BGI");

    int X0 = 2, Y0 = 2, X1 = 114, Y1 = 116;
```

```
    DDA(X0, Y0,   X1,Y1);
    getch();
    return 0;
}
```

Output :-