

Practical 2

Task 1 : Write a program to draw a line using DDA-Line Drawing algorithm and “Graphics.h”.

Source Code:

```
#include<graphics.h>
#include<stdio.h>
int main()
{
    int gd = DETECT, gm;
    int xa, ya, xb, yb;
    float xi, yi, steps;
    printf("Enter the starting point");
    scanf("%d %d", &xa, &ya);
    printf("Enter the ending point");
    scanf("%d %d", &xb, &yb);
    initgraph(&gd, &gm, NULL);

    int dx = xb - xa;
    int dy = yb - ya;
    if(dy < dx)
    {
        steps = dx;
    }
    else
    {
        steps = dy;
    }
    xi = (float)dx / steps;
    yi = (float)dy / steps;
    float x = xa, y = ya;
    int k = 0;
    while(k < steps){
        x += xi; y += yi;
        putpixel(x, y, WHITE);
        k++;
    }
    delay(5000);
    closegraph();
    return 0;}
```

Output:

```
adnrs96@aditya-hp-envy-15-notebook-pc:/media/adnrs96/Local Disk/Local Disk(G)/CG  
$ ./a.out  
Enter the starting point20  
30  
Enter the ending point70  
90
```

