

NAME: AMAN KANSWA L

Course : BCA 6 A

R.no : 11 (1121012)

A1) DDA

Source Code

```
#include <stdio.h>
#include <math.h>
#include <dos.h>
#include <graphics.h>
void main()
{
    float x2, x1, y2, y1, x, y, dx, dy, steps;
    int gd = DETECT, gm, i;
    printf("Enter the value of x1");
    scanf("%f", &x1);
    printf("Enter the value of y1");
    scanf("%f", &y1);
    printf("Enter the value of x2");
    scanf("%f", &x2);
    printf("Enter the value of y2");
    scanf("%f", &y2);
    initgraph(&gd, &gm, "C:\\TurboC3\\BGI");
    dx = abs(x2 - x1);
    dy = abs(y2 - y1);
    if(dx >= dy)
```

Amn

Steps = dx;

else

steps = dy;

dx = dx / steps;

dy = dy / steps;

x = x1;

y = y1;

i = 1;

while (i <= steps)

{

putpixel(x, y, 5);

x = dx + x;

y = dy + y;

i = i + 1;

delay(50);

}

delay(5000);

closegraph();

}

Ans

10

Algorithm

- STEP 1: Start main() function
 STEP 2: Input the values of x_1, x_2, y_1 , and y_2
 STEP 3: Initialize graph with `initgraph()`
 STEP 4: put $\text{abs}(x_2 - x_1)$ into dx
 STEP 5: put $\text{abs}(y_2 - y_1)$ into dy
 STEP 6: check if dx is greater than or equal to dy
 STEP 7: if yes, put the value of dx in steps
 STEP 7: if no, then put the value of dy in steps
 STEP 8: put the value of (dx / steps) into dx
 STEP 9: put the value of (dy / steps) into dy
 STEP 10: put x_1 into x and value of y_1 into y
 STEP 11: initialize i with 1
 STEP 12: Start a while loop with the condition $(i \leq \text{steps})$
 STEP 13: Inside the loop, use the function `putpixel()`
 STEP 14: then initialize x with $dx + x$ and y with $dy + y$
 STEP 15: initialize i with $i + 1$
 STEP 16: put the `delay()` function
 STEP 17: close the ~~group~~ loop
 STEP 18: Use the `delay()` function again
 STEP 19: then the function `closegraph()`
 STEP 20: close the main.
 STEP 21: END.