DDA Algorith implementation in C

1. #include <graphics.h>
2. #include <stdio.h>
3. #include <conio.h>
4. #include <math.h>

# void drawLine(int x1, int y1, int x2, int y2);

1. **void main()** {
2. int gdriver = DETECT, gmode;
3. int x1, y1, x2, y2;
4. clrscr();
5. initgraph(&gdriver, &gmode, "C:\\TURBOC3\\BGI");
6. // Input the line coordinates
7. printf("Enter the coordinates of the start point (x1, y1): ");
8. scanf("%d%d", &x1, &y1);
9. printf("Enter the coordinates of the end point (x2, y2): ");
10. scanf("%d%d", &x2, &y2);
11. drawLine(x1, y1, x2, y2);
12. getch();
13. closegraph();
14. }

# void drawLine(int x1, int y1, int x2, int y2)

1. {
2. int dx, dy, steps, k;
3. float x\_increment, y\_increment, x, y;
4. dx = x2 - x1;
5. dy = y2 - y1;
6. if (abs(dx) > abs(dy)) {
7. steps = abs(dx);
8. }
9. else
10. {
11. steps = abs(dy);
12. }
13. x\_increment = (float)dx / steps;
14. y\_increment = (float)dy / steps;
15. x = x1;
16. y = y1;
17. putpixel(floor(x), floor(y), GREEN);
18. for (k = 0; k < steps; k++) {
19. x += x\_increment;
20. y += y\_increment;
21. putpixel(floor(x), floor(y), GREEN);
22. delay(50); // Small delay to visualize the line drawing
23. }
24. }