Computer Graphics

Dr. Keshav Sinha

Lab 3: Implement DDA algorithm.

LAB Performance (In Lab Only)

- **Create the Word file and paste all the output images into that file.**
- **Write the short answer to the given question in the notebook.**
- **Make the Call Back Function with your name and also Display name in the output window.**

1). Implement the DDA algorithm to draw a line between two points.
2). Modify the DDA algorithm to handle lines with negative slopes.
3). Write a program using DDA to draw horizontal and vertical lines.
4). Implement DDA to draw lines with slopes greater than 1 and less than -1.
5). Modify the DDA algorithm to draw dashed lines between two points.
6). Implement DDA with subpixel accuracy for higher resolution line drawing.
7). Write a program to display the intermediate steps of the DDA algorithm as it calculates and plots each point.
8). Implement the DDA algorithm to draw a rectangle by specifying its opposite corner points.
9). Draw multiple lines using the DDA algorithm and create an interactive system where users input the endpoints.
10). Write a program to compare the visual output of the DDA algorithm with different pixel intensities for better line rendering.
11). Implement DDA to create a simple drawing tool where users can draw multiple lines consecutively.
12). Modify the DDA algorithm to change the line color based on the slope of the line.