

This Java program implements a simple line drawing algorithm, Bresenham's Line Drawing Algorithm, to draw a line between two points. Here's an explanation of what each function does:

drawLine Method:

This method uses Bresenham's Line Drawing Algorithm to draw a line between two points.

The parameters are as follows:

(x_1, y_1) : Coordinates of the starting point of the line

(x_2, y_2) : Coordinates of the ending point of the line

The algorithm draws the line pixel by pixel, determining the position of the next pixel at each step. It uses an error term while making calculations, which determines how much the line should move up or down.

Variables dx and dy represent the distances the line travels along the x and y axes, respectively.

$slopeError$ represents the error term, and it is used to determine the position of the next pixel while drawing the line.

Inside a loop, the coordinates of each point on the line are printed to the console.

main Method:

This method calls the drawline method to draw a line between two specified points.

For example, the call drawline (1,1,8,5) draws a line from the point (1,1) to the point (8,5).

This program can be used to understand basic graphics drawing algorithms and provides a foundation for drawing operations in various applications.