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Kelas : **D**
Mata Kuliah : **Grafikom**

Tugas Algoritma Pembentukan Garis Bersenham dan DDA

1. Algortima Bersenham

- Source Code :

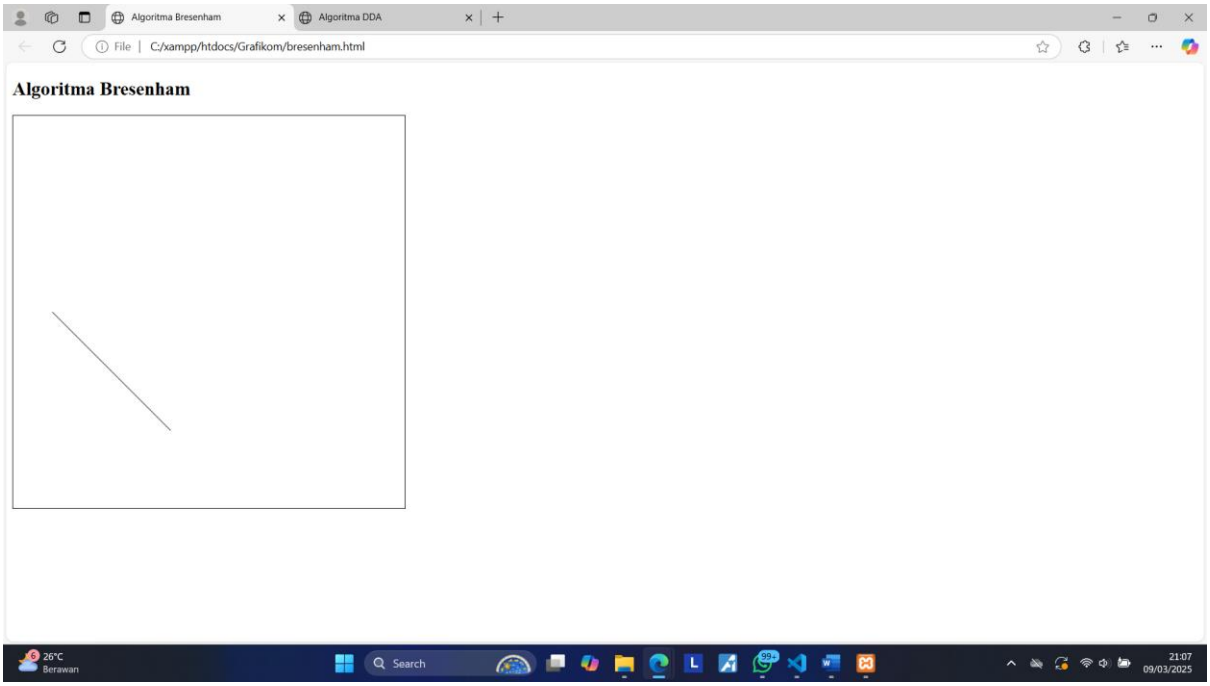
```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Algoritma Bresenham</title>
    <style>
        canvas {
            border: 1px solid black;
        }
    </style>
</head>
<body>
    <h2>Algoritma Bresenham</h2>
    <canvas id="canvasBresenham" width="500" height="500"></canvas>
    <script>
        const canvasBresenham = document.getElementById("canvasBresenham");
        const ctxBresenham = canvasBresenham.getContext("2d");

        function drawPixel(x, y) {
            ctxBresenham.fillStyle = "black";
            ctxBresenham.fillRect(x, y, 1, 1);
        }

        function bresenham(x1, y1, x2, y2) {
            let dx = Math.abs(x2 - x1);
            let dy = Math.abs(y2 - y1);
            let sx = x1 < x2 ? 1 : -1;
            let sy = y1 < y2 ? 1 : -1;
            let err = dx - dy;
            while (true) {
                drawPixel(x1, y1);
                if (x1 === x2 && y1 === y2) break;
                let e2 = 2 * err;
                if (e2 > -dy) { err -= dy; x1 += sx; }
                if (e2 < dx) { err += dx; y1 += sy; }
            }
        }

        bresenham(50, 250, 200, 400);
    </script>
</body>
</html>
```

- Hasil



2. Algoritma DDA

- Source Code :

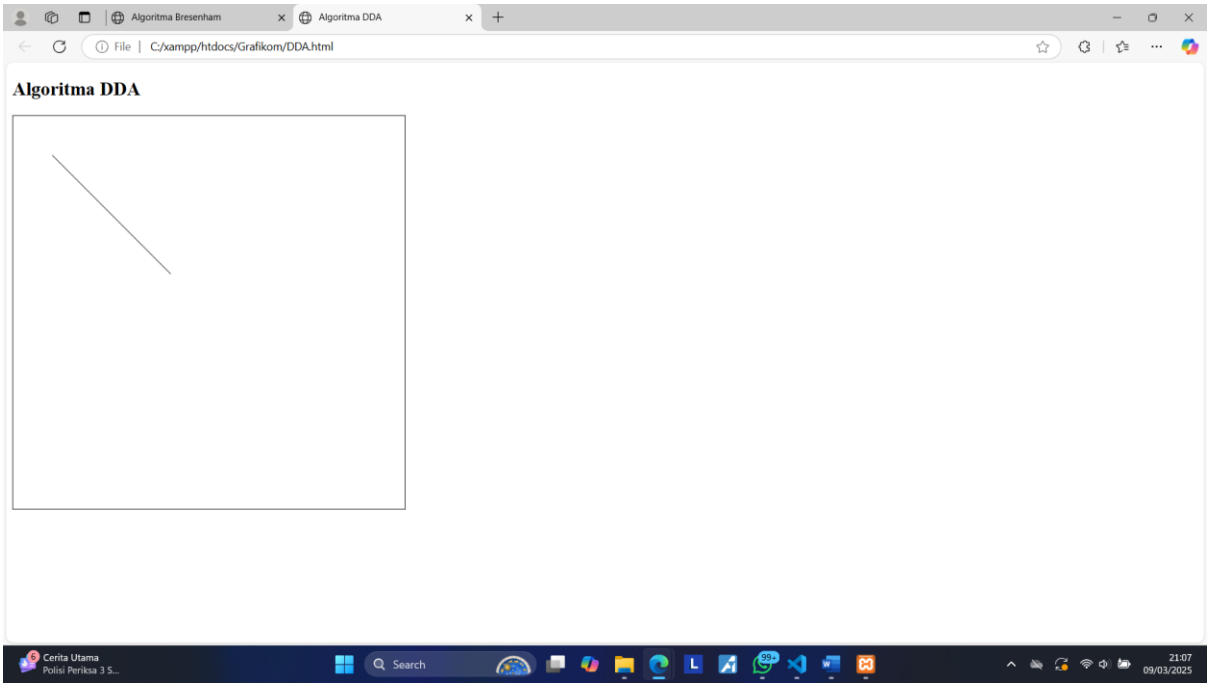
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Algoritma DDA</title>
    <style>
        canvas {
            border: 1px solid black;
        }
    </style>
</head>
<body>
    <h2>Algoritma DDA</h2>
    <canvas id="canvasDDA" width="500" height="500"></canvas>
    <script>
        const canvasDDA = document.getElementById("canvasDDA");
        const ctxDDA = canvasDDA.getContext("2d");

        function drawPixel(x, y) {
            ctxDDA.fillStyle = "black";
            ctxDDA.fillRect(x, y, 1, 1);
        }

        function dda(x1, y1, x2, y2) {
            let dx = x2 - x1;
            let dy = y2 - y1;
            let steps = Math.max(Math.abs(dx), Math.abs(dy));
            let xInc = dx / steps;
            let yInc = dy / steps;
            let x = x1;
            let y = y1;
            for (let i = 0; i <= steps; i++) {
                drawPixel(Math.round(x), Math.round(y));
                x += xInc;
                y += yInc;
            }
        }

        dda(50, 50, 200, 200);
    </script>
</body>
</html>
```

- Hasil :


Algoritma Bresenham
Algoritma DDA
File | C:/xampp/htdocs/Grafikom/DDA.html
Algoritma DDA
Cerita Utama
Polisi Periksa 3 S...
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