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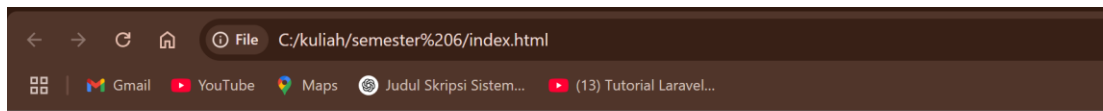
Kelas : AB

## Algoritma Pembentukan Garis DDA & Bresenham di JavaScript

```
index.html X
C: > kuliah > semester 6 > index.html > html > head > script > draw
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Algoritma DDA & Bresenham (parameter) y: any
7   <script>
8     function drawPixel(ctx, x, y, color) {
9       ctx.fillStyle = color;
10      ctx.fillRect(x, y, 2, 2);
11    }
12
13    function drawLineDDA(ctx, x1, y1, x2, y2, color) {
14      let dx = x2 - x1;
15      let dy = y2 - y1;
16      let steps = Math.max(Math.abs(dx), Math.abs(dy));
17
18      let xIncrement = dx / steps;
19      let yIncrement = dy / steps;
20
21      let x = x1;
22      let y = y1;
23
24      for (let i = 0; i <= steps; i++) {
25        drawPixel(ctx, Math.round(x), Math.round(y), color);
26        x += xIncrement;
27        y += yIncrement;
28      }
29    }
30  </script>
```

```
index.html X
C: > kuliah > semester 6 > index.html > html > head > script > drawLineDDA
2 <html lang="en">
3 <head>
7   <script>
31    function drawLineBresenham(ctx, x1, y1, x2, y2, color) {
32      let dx = Math.abs(x2 - x1);
33      let dy = Math.abs(y2 - y1);
34      let sx = (x1 < x2) ? 1 : -1;
35      let sy = (y1 < y2) ? 1 : -1;
36      let err = dx - dy;
37
38      while (true) {
39        drawPixel(ctx, x1, y1, color);
40        if (x1 === x2 && y1 === y2) break;
41        let e2 = 2 * err;
42        if (e2 > -dy) {
43          err -= dy;
44          x1 += sx;
45        }
46        if (e2 < dx) {
47          err += dx;
48          y1 += sy;
49        }
50      }
51    }
52
53    function draw() {
54      let canvas = document.getElementById("canvas");
55      let ctx = canvas.getContext("2d");
56      ctx.clearRect(0, 0, canvas.width, canvas.height);
57
58      drawLineDDA(ctx, 50, 50, 200, 300, "black");
59      drawLineBresenham(ctx, 90, 50, 250, 300, "green");
60    }
61  </script>
62 </head>
63 <body onload="draw()">
64   <h1>Algoritma DDA & Bresenham</h1>
65   <canvas id="canvas" width="800" height="400" style="border:1px solid black;"></canvas>
66 </body>
67 </html>
68
```

**OUTPUT :**



## Algoritma DDA & Bresenham

