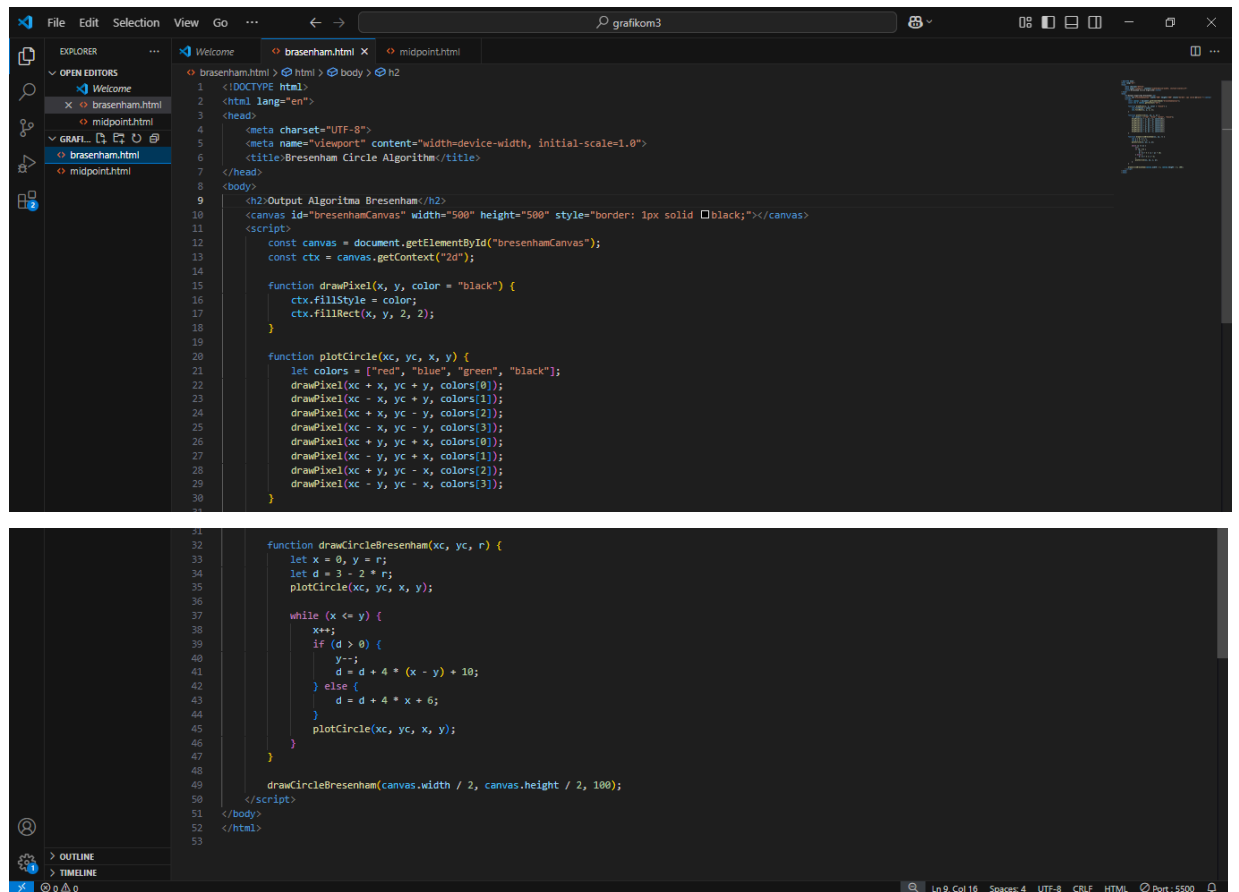


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Mata Kuliah Grafika Komputer

Tugas Algoritma Pembentukan Lingkaran

Source Code :

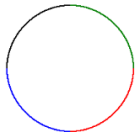


Bresenham Circle Algorithm

Midpoint Circle Algorithm

127.0.0.1:5500/brassenham.html

Output Algoritma Bresenham

A screenshot of a web browser displaying the output of the Bresenham circle algorithm. The browser's address bar shows the URL "127.0.0.1:5500/brassenham.html". The page title is "Output Algoritma Bresenham". The main content area shows a circle drawn on a white background. The circle is composed of many small, colored segments (blue, green, red, yellow, orange, purple) that form a continuous, pixelated path, demonstrating the algorithm's output.

2. Menggunakan Algoritma MidPoint

Source Code :

```
File Edit Selection View Go ... grafikom3
EXPLORER
  OPEN EDITORS
    Welcome
    brasham.html
    X midpoint.html
  GRAPH...
    brasham.html
    midpoint.html
  OUTPUT
  TIMELINE
  0 0 0

midpoint.html > html > body
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>Midpoint Circle Algorithm</title>
7 </head>
8 <body>
9   <h2>Output Algoritma Midpoint</h2>
10  <canvas id="midpointCanvas" width="500" height="500" style="border: 1px solid black;"></canvas>
11  <script>
12    const canvasMid = document.getElementById("midpointCanvas");
13    const ctxMid = canvasMid.getContext("2d");
14
15    function drawPixelMid(x, y, color = "black") {
16      ctxMid.fillStyle = color;
17      ctxMid.fillRect(x, y, 2);
18    }
19
20    function plotMidCircle(xc, yc, x, y) {
21      let colors = ["blue", "red", "black", "orange"];
22      drawPixelMid(xc + x, yc + y, colors[0]);
23      drawPixelMid(xc - x, yc + y, colors[1]);
24      drawPixelMid(xc + x, yc - y, colors[2]);
25      drawPixelMid(xc - x, yc - y, colors[3]);
26      drawPixelMid(xc + y, yc + x, colors[0]);
27      drawPixelMid(xc - y, yc + x, colors[1]);
28      drawPixelMid(xc + y, yc - x, colors[2]);
29      drawPixelMid(xc - y, yc - x, colors[3]);
30    }
31
32    function drawCircleMidpoint(xc, yc, r) {
33      let x = 0, y = r;
34      let p = 1 - r;
35      plotMidCircle(xc, yc, x, y);
36
37      while (x < y) {
38        x++;
39        if (p < 0) {
40          p += 2 * x + 1;
41        } else {
42          y--;
43          p += 2 * (x - y) + 1;
44        }
45        plotMidCircle(xc, yc, x, y);
46      }
47    }
48
49    drawCircleMidpoint(canvasMid.width / 2, canvasMid.height / 2, 100);
50  </script>
51 </body>
52 </html>
53
```

Output :

