

## **TUGAS PEMBUATAN LINGKARAN BRESENHAM DAN MIDPOINT**

“laporan ini diajukan guna memenuhi tugas mata kuliah grafika komputer”



Dosen Pengampu:

- 1) Febi Eka Febriansyah, M.T.
- 2) Wartariyus, S.Kom., M.T.I.
- 3) Putut Aji Nalendro, S.Pd., M.Pd.

**Disusun Oleh:**

Nama: Isnaya Apriliani

NPM: 2413025050

Kelas: PTI24B

**PROGRAM STUDI PENDIDIKAN TEKNOLOGI INFORMASI  
JURUSAN PENDIDIKAN MATEMATIKA DAN ILMU PENGETAHUAN ALAM  
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN  
UNIVERSITAS LAMPUNG**

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## INPUT:

```
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>Tugas Grafkom Lingkaran</title>
7   <style>
8     canvas {
9       border: 1px solid #000000;
10    }
11  </style>
12 </head>
13 <body>
14   <h1 align="center">TUGAS MEMBUAT LINGKARAN BRESENHAM DAN MIDPOINT</h1>
15   <canvas id="myCanvas" width="300" height="300"></canvas>
16   <canvas id="midpoint" width="300" height="300"></canvas>
17
18   <script>
19     let canvas = document.getElementById("myCanvas");
20     let ctx = canvas.getContext("2d");
21     let midpoint = document.getElementById("midpoint");
22     let ctxmidpoint = midpoint.getContext("2d");
23
24     function titik(x, y, warna) {
25       ctx.fillStyle = warna;
26       ctx.fillRect(x, y, 1, 1);
27     }
28
29     function gambarTitikSimetris(x0, y0, x, y, warna) {
30       titik(x0 + x, y0 + y, warna);
31       titik(x0 - x, y0 + y, warna);
32       titik(x0 + x, y0 - y, warna);
33       titik(x0 - x, y0 - y, warna);
34       titik(x0 + y, y0 + x, warna);
35       titik(x0 - y, y0 + x, warna);
36       titik(x0 + y, y0 - x, warna);
37       titik(x0 - y, y0 - x, warna);
38     }
39
40     function linkBres(x0, y0, r, warna) {
41       let d = 3 - (2 * r);
42       let x = 0, y = r;
43
44       while (x <= y) {
45         gambarTitikSimetris(x0, y0, x, y, warna);
46         if (d <= 0) {
47           d = d + (4 * x) + 6;
48         } else {
49           d = d + 4 * (x - y) + 10;
50           y--;
51         }
52         x++;
53       }
54     }
55
56     function buatGambar() {
57       ctx.clearRect(0, 0, canvas.width, canvas.height);
58       let x0 = parseInt(document.getElementById("X").value);
59       let y0 = parseInt(document.getElementById("Y").value);
60       let r = parseInt(document.getElementById("rad").value);
61       let warna = document.getElementById("warna").value;
62       linkBres(x0, y0, r, warna);
63     }
64
65     function drawmidpoint(x0, y0, r) {
66       let x = r, y = 0;
67       let d = 1 - r;
68
69       while (x >= y) {
70         ctxmidpoint.fillRect(x0 + x, y0 + y, 1, 1);
```

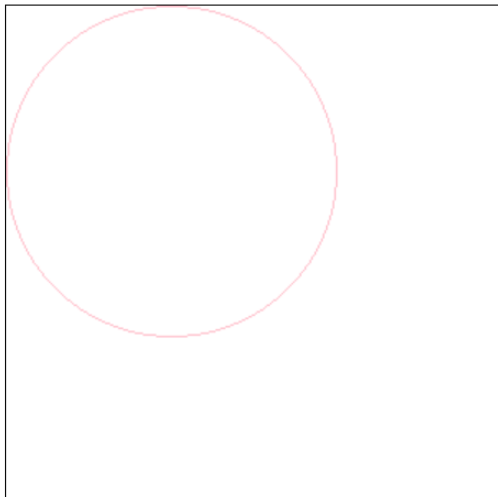
```

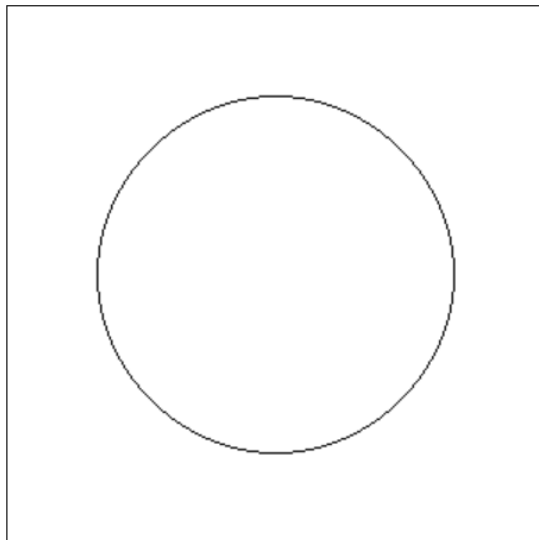
71         ctxmidpoint.fillRect(x0 - x, y0 + y, 1, 1);
72         ctxmidpoint.fillRect(x0 + x, y0 - y, 1, 1);
73         ctxmidpoint.fillRect(x0 - x, y0 - y, 1, 1);
74         ctxmidpoint.fillRect(x0 + y, y0 + x, 1, 1);
75         ctxmidpoint.fillRect(x0 - y, y0 + x, 1, 1);
76         ctxmidpoint.fillRect(x0 + y, y0 - x, 1, 1);
77         ctxmidpoint.fillRect(x0 - y, y0 - x, 1, 1);
78
79         y++;
80         if (d > 0) {
81             x--;
82             d += 2 * (y - x) + 5;
83         } else {
84             d += 2 * y + 3;
85         }
86     }
87 }
88
89 drawmidpoint(150, 150, 100);
90 </script>
91
92 <br>
93 X0 = <input id="X" type="text" size="2">
94 Y0 = <input id="Y" type="text" size="2">
95 Radius = <input id="rad" type="text" size="2">
96 <br>
97 Warna = <input id="warna" type="text" size="7" placeholder="contoh: red">
98 <br>
99 <button type="button" onclick="buatGambar()">PROSES</button>
100 <br><br>
101 <a href="index.html">kembali ke home</a>
102 </body>

```

OUTPUT:

## TUGAS MEMBUAT LINGKARAN BRESENHAM DAN MIDPOINT





X0 =  Y0 =  Radius =

Warna =

[kembali ke home](#)

**LINK VIDEO:**

[https://youtu.be/hfzCIBJEIYg?si=6v54QIWelfftQc\\_y](https://youtu.be/hfzCIBJEIYg?si=6v54QIWelfftQc_y)