

## CODE PROGRAM JAVASCRIPT LINGKARAN

```
<!DOCTYPE html>

<html lang="id">

  <head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Algoritma lingkaran Bresenham</title>

  <style>

    body {

      font-family: Arial, Helvetica, sans-serif;

      display: flex;

      flex-direction: column;

      align-items: center;

      justify-content: center;

      height: 100vh;

      margin: 0;

      background-color: white;

    }

    h1 {

      margin-bottom: 20px;

    }

    canvas {

      border: 1px solid black;
```

```

        background-color: white;
    }

</style>
</head>
<body>
    <h1> Lingkaran Bresenham </h1>
    <canvas id="canvas" width="400" height="400"></canvas>

    <script>
        function AlgoritmaBresenham(x0, y0, r) {
            const canvas = document.getElementById('canvas');
            const ctx = canvas.getContext('2d');

            let x = 0;
            let y = r;
            let d = 3 - 2 * r;

            function drawPoints(x, y) {
                ctx.fillRect(x0 + x, y0 + y, 2, 2);
                ctx.fillRect(x0 - x, y0 + y, 2, 2);
                ctx.fillRect(x0 + x, y0 - y, 2, 2);
                ctx.fillRect(x0 - x, y0 - y, 2, 2);
                ctx.fillRect(x0 + y, y0 + x, 2, 2);
                ctx.fillRect(x0 - y, y0 + x, 2, 2);
                ctx.fillRect(x0 + y, y0 - x, 2, 2);
                ctx.fillRect(x0 - y, y0 - x, 2, 2);
            }
        }
    </script>

```

```
}
```

```
drawPoints(x, y);
```

```
while (y >= x) {
```

```
    x++;
```

```
    if (d < 0) {
```

```
        d = d + 4 * x + 6;
```

```
    } else {
```

```
        y--;
```

```
        d = d + 4 * (x - y) + 10;
```

```
    }
```

```
drawPoints(x, y);
```

```
}
```

```
}
```

```
const x0 = 200, y0 = 200;
```

```
const r = 100;
```

```
AlgoritmaBresenham(x0, y0, r);
```

```
</script>
```

```
</body>
```

```
</html>
```