

Bresenham's Algorithm Example

Bresenham's algorithm

For scan converting a line from $P1(x_1, y_1)$ to $P2(x_2, y_2)$

```
int x = x1, y = y1
int dx = x2 - x1, dy = y1 - y2, dT = 2(dy - dx), dS = 2dy;
int d = 2dy - dx;
```

```
setPixel(x, y);
```

```
while (x < x2)
```

```
{
```

```
    x = x + 1;
```

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

```
        d = d + dS;
```

```
    else
```

```
    {
```

```
        y = y + 1;
```

```
        d = d + dT;
```

```
    }
```

```
    setPixel(x, y);
```

```
}
```