

DDA Line Drawing Algorithm

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[1]: from matplotlib import pyplot as plt
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[2]: def DDA(x0, y0, x1, y1):
    dx = abs(x0 - x1)
    dy = abs(y0 - y1)
    steps = max(dx, dy)
    xinc = dx/steps
    yinc = dy/steps

    x = float(x0)
    y = float(y0)

    x_coordinates = []
    y_coordinates = []
    for i in range(steps):
        x_coordinates.append(x)
        y_coordinates.append(y)
        x = x + xinc
        y = y + yinc
    plt.plot(x_coordinates, y_coordinates, marker="o",
             markersize=1, markerfacecolor="green")
    plt.show()
```

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[3]: if __name__ == "__main__":
    x0, y0 = 20, 20
    x1, y1 = 60, 50
    DDA(x0, y0, x1, y1)
```

