

Implementation of DDA line Drawing Algorithm(Python)

Algorithm: DDA Line Drawing

step 1: Input the starting and ending co-ordinate of the line: (x_1, y_1) and (x_2, y_2)

step 2: Calculate the differences of the co-ordinate: $dx = x_2 - x_1$ and $dy = y_2 - y_1$

step 3: Determine the number of steps : $steps = \text{int}(\max(\text{abs}(dx), \text{abs}(dy)))$

step 4: Calculate the increments values: $x_inc = dx/steps$ and $y_inc = dy/steps$

step 5: Initialize starting points: $x = x_1$ and $y = y_1$

step 6: Plot the point (x, y)

step 7: Repeat the following for steps times: $x = x + x_inc$ and $y = y + y_inc$, plot the point $(\text{round}(x), \text{round}(y))$

step 8: End