

Reason for use:

In MPL Algorithm, each individual zone has a different algorithm as it lacks optimization. For this reason we end up writing a lot of redundant lines of code. Using 8 way Symmetry is one way to making MPL Algorithm more optimized.

Explanation:

If an arbitrary point is selected at zone 0, as (7,14) then we can derive its corresponding coordinates in the other zones by using reflection in the lines (4=21) & (4=-x) along with the (or-axis) & (y-axis). from the figure above it can be determined that any point in Instruct some can be traced back to some o (21,13), by going through the corresponding rearrangement of the nely coordinates in the other zones.

D How the Algorithm works: He only need the mid-point line Algorithm for zone O. We can use it to draw a line that

lies in any other zone Just by conversion.

We transform the start and end points for the line from another zone to zone O. Then we calculate pixels for one line in zone 0, often each Pixel is calculated it is convented back to its original some and drawn there. (1-12-) (p-1x-)

So we'll be needing two different set of Conversions. Why? We can see that while generating the conversions.

(5-1)/(x-1h) @ (2-1h-)

son for use: In MPL Algorithm, each individual zone has a differen algorithm as it lacks optimization. For this reason we up writing a lot of redundant lives of code. Using 8 way Examinedry is one way to making mpe Algorithm amore optimized.

If an arbitrory point is selected at zone 0, as (x, u) then we can derive its corresponding coordinates in the other somes pol naind reflection in the sines (A=5) of (A=-> along with the (oraxis) & (y-axis). from the figure above it can be determined that any point in mother some can be traced back to some o (2018), by going through the corresponding rearrangement of the real coordinates in the other zones.

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(	onverting From Any Other 2me to 2 and O: and (11)	
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zones	(0)	+
Zone O	New 2 - 2	
zone 1	Now x = y = 10 ( mass y = 120g): missours)	
zone 2		
zone 3	New x = -x < New y = -x <	
20ne 4	New y = = y ple , was at a	
2 one 5	New 2=+-4	
	DA = (av-) by = xin	
20ne 6		
zone 7	New 2 = 2   New 4 = -4	
	The conversion	и
	if there is 5 minus signs and almost it needs to be multiplied with the	
1	it needs to be multiplied with the similar except for zone 2 &	
	onverting from zone o to the original zones: 2000 6.	
20nes	tor y	
zone O	The state of the s	
2me 1	1 2 2 2 4 (3-, 21-) New 4 = X P	
	New 2 = -4 (1-12) New 34 8 22	
Zone 2	I New 45 91	
zone 3	New x = -2   New y = -y   19   81	
zone 4	New 2 = -2	
2000 S	New x = -y P P New y= Te	
zone 6	New x = y (01-105 NewAYI= AX 01 05	
zone 7	New x= x New y = -y	
* 5	.I	

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