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	Cormetion & Filling
_	Title: chessboard (4x4) 3-D transformation & filling.
_	1. Itila all avagram to draw 4x4 chessboard
-	problem statement: Write C++ program to draw 4x4; chessboard rotated 45° with horizontal axis. Use
+	Direction describes to draw all the ling.
	Use seed fill algorithm to fill black squares of the rotated chessboard.
	or the votated theseboard.
	OF TIME TOWNER CHARLES
ŀ	Objective - To leash & implement the transformation, filling
-	Objective : 10 leasn & implimate via
-	in computer graphics.
-	of words (DD)
L	s/w used: Ot creator, CPP.
_	2000 2000
_	
_	Theory:
_	· Proceeding drawing:
_	· Bresenham's line drawing:
-	It was the addition & substraction due to which it is
	faster than DDA. It is used in computer aided derign
	animation.
	interior same interior interior
	Algorithm:
-	ECO YEVI
	for x < x1 to x2 do
printi	plot point at (x,y)
	plot point at (x,y)  IF (E+m20.5)
i dell'e	E = E + M
por.	else
	7=7+7
	The state of the s

EKE +m-1 ENDIF

SOFUNS

## Rotation at 45° (2-D transformation)

In rotation, we rotate the object at particular angle 0 from origin. From the figure we can see that  $p(x_1y)$  is located at angle 0 from the horizontal x coordinate with distance x from origin.

1	x1 /		(050)	onie	0		X	/
	41	=	-sin 0	(0sQ	0	#	1	1
	١		6	٥	1		1	

Rotated Rotation matrix co-ordinate madrix Matrix

Pseudocode for multiplication:

procedure MatrixMulti (CMatrix, TMatrix

input: CMatrix, TMatrix

Output: Tronyformed Matrix

for (i=0; i<n; i++)

for (j=0; j<n; j+1)

Transformed Matrix (illi) = 0

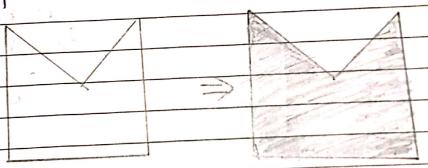
for (k=0; K<n; K++)

C INANIA CICITA	Transformed Matrix (i)(j) +
Transformed Matrix Lists	(matrix (i)(k) *
	E Matrix [k](j)

end for end for end for end MultiMatily

## Polygon filling:

process of colouring area of polygon.



Filling the polygon means highlighting all the pixels which lies inside the polygon with any Colour other than backgnund

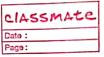
Pseudocodo:

Algorithm flood-Fill (x, y, fill(olor, bkcolor start if (get pixel (x,y) == bx color) then

CIASSMAte
Date :
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- 7	a Dia di Janet di Albania	in Constantion
3	Col fill (x+1) y, fill(olox)	PK (Ol Ox)
	Flood - fill (x, y+), fill to lay	prcolor)
	r-loud-fill (x-1, y, fillcolor,	PK(Olo 1)
	Flued-fill (x, u-1) fill culor,	PK(Olax)
	END	, 12,1
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		- Fresenham's line deall
		algorithm.
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		Milling filling
		polygon filling algorithm
		algorierin.
( Q.E.	A remarked a skilling	all to bed
11		1 4

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		Rotate the the
		Chess boazed
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Conclusion:

we have leasen & implement the Bresenhum's line drawing algorithm, polygon flood-fill algorithm, 2-D Rutation on they board.

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