-	The and boughton and the state of the state
	litle: 3-1) transformations
	1 Les avois cut marram for grow 3-D
Section of the last of the las	problem Statement: Write (It program for drow 3-D) Cabe & perform following transformation
-	on open (n). Tournal sligh Defetion about
-	· Scaling nanslation Rosal
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	Objective = To learn & implement 3-D transformation on open Col.
	objective = To learn & implement 3-D transformania
	on open (ol.
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	in his bound different
	Outcome: Student will able to understand different
	types of transformation on OpenGL.
	Slw/hlw = Of (real up, Openal.
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	Theolog:
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	Open (n): Open (
_	Januare Cross Diatform API for
_	2 cross language cross plant in 2-D compute &
_	the execution and animation that we are
	graphics The interface consist of aver 250
	graphics. The interfore consist of over 2.50 different function call - we see it for
	Open Gruphics library is specification dofining a cross language cross platform API for the Creating application that in 3-D compute e graphics. The interface consist of aver 250 different function (all - we see it for drawing complex 3-D scenes for simple
	graphics. The interfoce consist of aver 250 different function (all - we see it for drawing complex 3-1) scenes for simple programming.

	3-D transformation:
	It mean chaging some graphics into something else by applying rules of 3-D objects.
\parallel	It mean chaging some graphics mis some
	else by applying rules of 3-0 vojeas.
1	in house three - force
#	like 2-D transformation it also have three-four
3	11000
\parallel	types i) translation
$-\parallel$	is coaling of
	iii) Rotution.
\dashv	2 0 11.
	1 V days along on 3-D plank
	called 3-D transformation.
	called 3-D transomation.
	Tuolalian:
	• Tranglation:
	The translation can also lie interpret as add
	The translation can also the interprets in constant vector at any point. mean moving object to different position.
	in constant vector different Dosition.
	mean moving object to arriver
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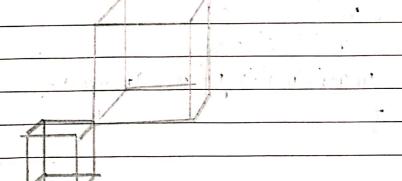
· Potation:

It is process of rotate the 3.D object at patticular angle. It can be clockwise of anti-clockwise.



· Scaling
To referring to altering the size of object

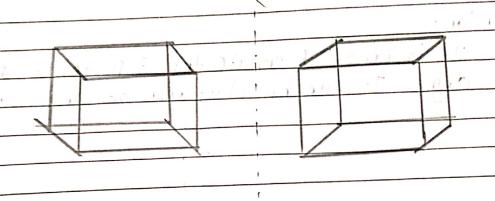
for appearing farther or reaser from view.



· Reflection >

It is used to emulate the reflective object like mirrors & surfaces:

Date :	-
Page:	



Algorithm =

1. Translate (tx, ty, tz)

matrix 4x4 m matrix set identity (m); m(o)[3]=tx;

m (1)(3) = ty;

m[2](3)=t2) matrixmultiply (m, thematrise

2. Scale (SX, Sy, SZ)

matrix4x4 ms matrix Setidentity (m); m(0)(0) = Sx; m(0)(3) = (1-5x); m(1)(1) = Sy;

```
m (1)(3)=(1-54)
 m(2)(2) = 52

m(2)(3) = 1-52
 matis multiply (m, thematisx)
```

3. Rotate (float angle)

matiix4x4 m matrix set i dentity (m);

Ongle = angle * 22 | 1266;

m(D(1) = as angle m(1)(2) = -sin ungle (2)() = Sin anyle

m[2)[2) = (0) angle

Conclusion:

we have learn & implement 3-D transformation On Opp GL.