



Villa Marie Degree College For Women  
Somajiguda, Hyderabad-500082  
Affiliated to Osmania University  
Management Programs Approved by AICTE  
Recognised by UGC u/s 2(f), An ISO 9001:2015 Certified Institution  
Accredited with B++ Grade by NAAC



**Department of Mathematics and Statistics**

is

**Organising**

**EXTENSION LECTURE**

on

**Transformations in Computer Graphics**



**GUEST SPEAKER**

**DR M. HEMANTHA LAKSHMI**

Associate professor, Geethanjali  
college of engineering and  
technology

**VENUE : APJ ABDUL KALAM  
AUDITORIUM**

**Target Audience : BSc I,II,III YEAR**

**DATE : 14TH AUGUST 2024**

**TIME : 10:30 AM - 11:30 AM**



# Topic: Transformations in Computer Graphics

Extension Lecture  
by



Dr M. Hemantha Lakshmi  
Associate Professor

De  
Geethanjali Coll



Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082,  
TG, India

Lat 17.421364, Long 78.459746

08/14/2024 10:41 AM GMT+05:30

Note : Captured by GPS Map Camera

GPS Map Camera

14/08/24 BOM UT-1  
I Answer any '1' (1x5=5M)  
1) Adds to Trade  
or  
2) Characteristics of Business  
II Answer any '2' (2x5=10M)  
1) Explain the functions of business







Applications in Computer Graphics  
Extension Lecture  
by

Dr M. Hemant  
Associate  
Dept of Free  
Geethanjali College of En  
Hy

14/08/24  
BOM UT-1  
I Answer any 7' (15=5M)  
1) Aids to Trade  
or  
2) Characteristics of Business  
II Answer any '2' (10=10)  
1) Explain the functions of business  
or  
2) Explain the objectives of business

GPS Map Camera



Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082,

TG, India

Lat 17.421351, Long 78.459770

08/14/2024 10:38 AM GMT+05:30

Note : Captured by GPS Map Camera



# Transformations in Computer Graphics

Extension Lecture  
by



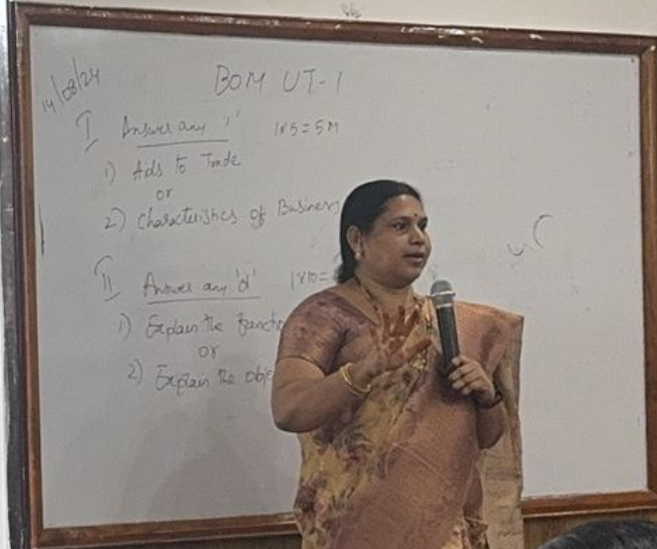
Dr M. Hemantha Lakshmi

Associate Professor

Dept of Freshman Engineering

Geethanjali College of Engineering and Technology

Hyderabad



GPS Map Camera



Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082,  
TG, India

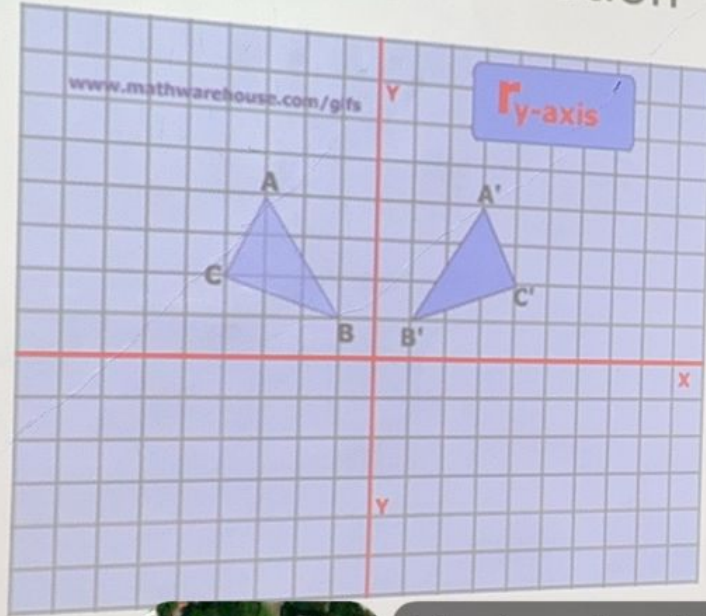
Lat 17.421389, Long 78.459734

08/14/2024 10:42 AM GMT+05:30

Note : Captured by GPS Map Camera



# Reflection animation



Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082,  
TG, India

Lat 17.421349, Long 78.459889

08/14/2024 11:07 AM GMT+05:30

Note : Captured by GPS Map Camera

GPS Map Camera

14/08/24 BOM UT-1  
I. Introduction 11:5-5:11  
1) Aids to Trade  
or  
2) Characteristics of Business  
II. Answer any 01! 11:20-10:11  
1) Explain the functions of business  
or  
2) Explain the objectives of





# Shearing

- Shearing is a transformation that slants the shape of an object. In a shearing transformation, points within the object are displaced by a proportional amount in a specific direction. This transformation is particularly useful in graphics for creating effects like slanting text, skewing shapes, or simulating perspective distortions.
  - **Shearing along the X-axis**
  - The shearing transformation matrix for shearing along the x-axis by a factor of a is:
- $$\begin{bmatrix} 1 & a \\ 0 & 1 \end{bmatrix}$$
- If you apply this transformation to a point  $(x, y)$ , the new coordinates  $(x', y')$  will be:

$$\begin{bmatrix} x' \\ y' \end{bmatrix} = \begin{bmatrix} 1 & a \\ 0 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix}$$



Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082,  
TG, India

Lat 17.421425, Long 78.459782

08/14/2024 10:53 AM GMT+05:30

Note : Captured by GPS Map Camera



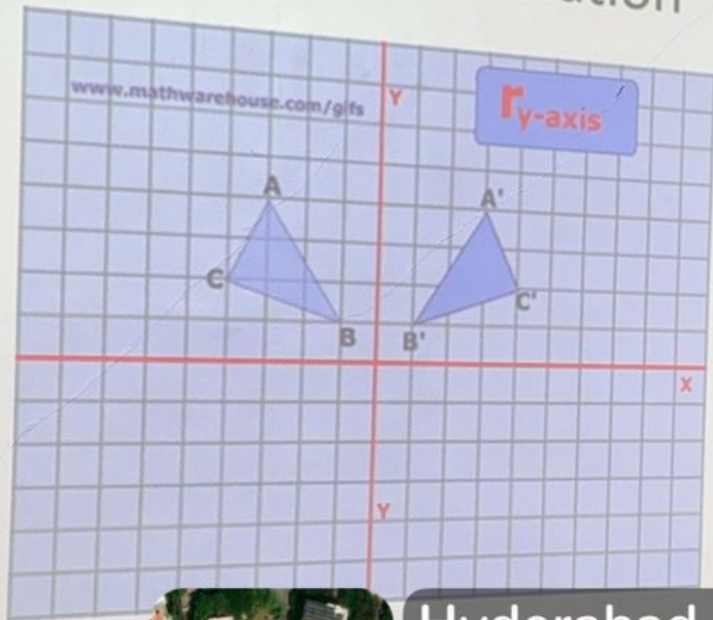
GPS Map Camera

14/08/24 BOM UT-1  
I Answer any 1' 1/5=5M  
1) Adv to Trade  
or  
2) Characteristics of Business  
II Answer any 2' 1/10=10M  
1) Explain the functions of business





# Reflection animation



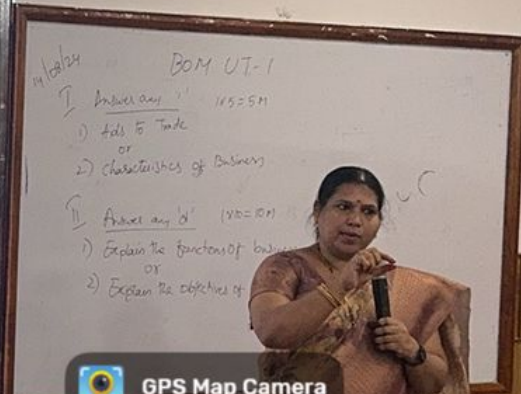
Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082,  
TG, India

Lat 17.421340, Long 78.459903

08/14/2024 11:07 AM GMT+05:30

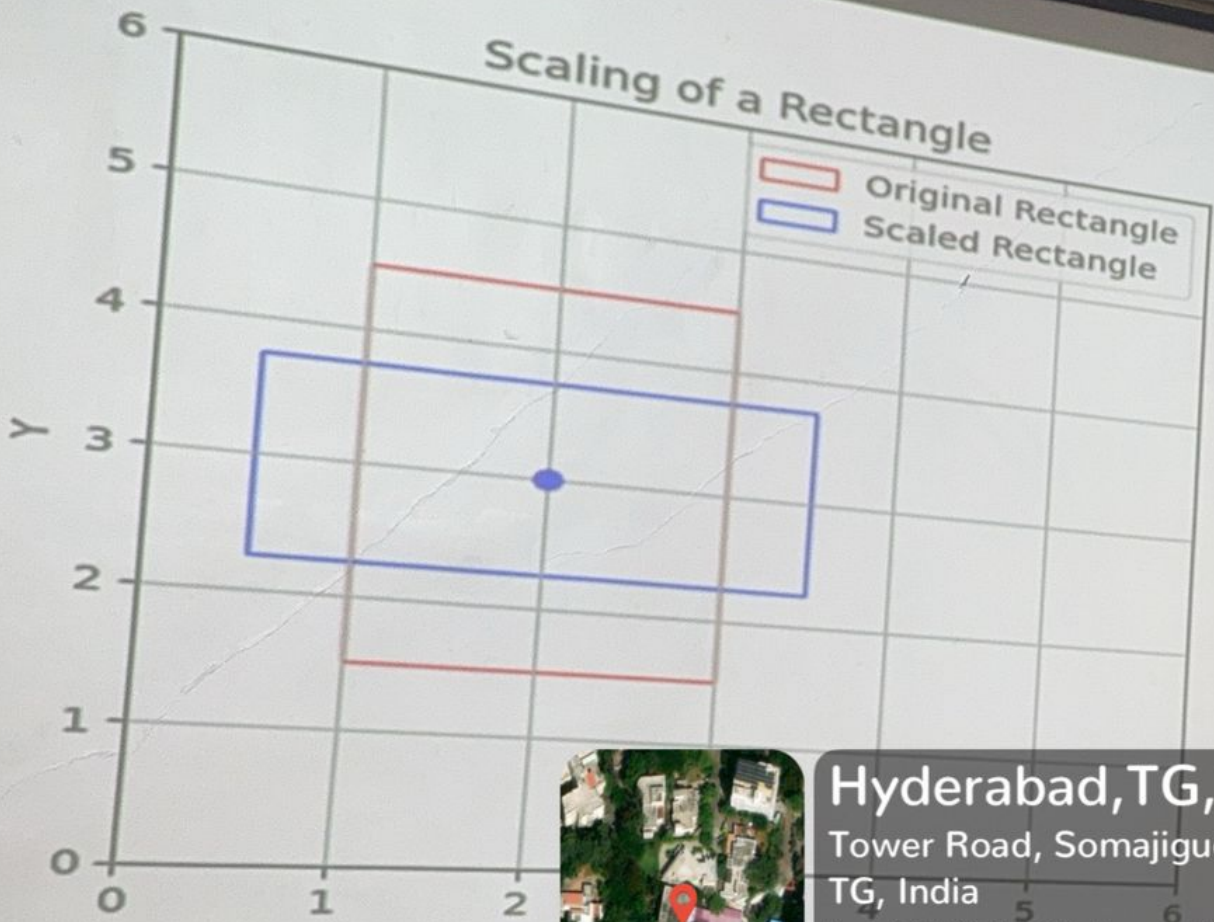
Note : Captured by GPS Map Camera



GPS Map Camera







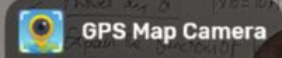
**Hyderabad, TG, India**

Tower Road, Somajiguda, Hyderabad, 500082,  
TG, India

Lat 17.421329, Long 78.459781

08/14/2024 10:53 AM GMT+05:30

Note : Captured by GPS Map Camera



14/08/24 BOM UT-1

I Answer any 1' 1/2 = 5M

- 1) Adds to Trade or
- 2) Characteristics of Business

ii Answer any 1' 1/2 = 5M

- 1) Explain the objectives of





14/08/24

BOM U1-1

I Answer any '1' 1x5=5M

Details to Trade

Characteristics of ...

any 'd' ... = 10M



GPS Map Camera



Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082, TG, India

Lat 17.421358, Long 78.459774

08/14/2024 11:16 AM GMT+05:30

Note : Captured by GPS Map Camera

ology





VELA MAJEE DEGREE COLLEGE FOR WOMEN  
WOMEN EMPOWERMENT COLLEGE  
WELFARE COLLEGE

BOM UT-1  
1. Introduction  
2. ...



GPS Map Camera

Hyderabad, TG, India

Tower Road, Somajiguda, Hyderabad, 500082,

TG, India

Lat 17.421360, Long 78.459698

08/14/2024 11:18 AM GMT+05:30

Note : Captured by GPS Map Camera