

Scene - whatever our eyes can see.

Image - 2D projection of scene.

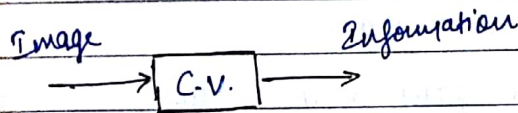
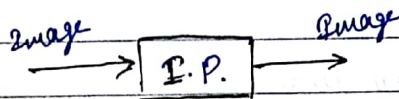
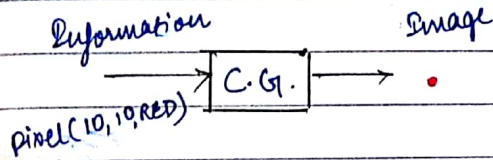
Pixel - Picture element

(x, y, w)

Image processing

Computer Graphics

Computer vision



Recommended books

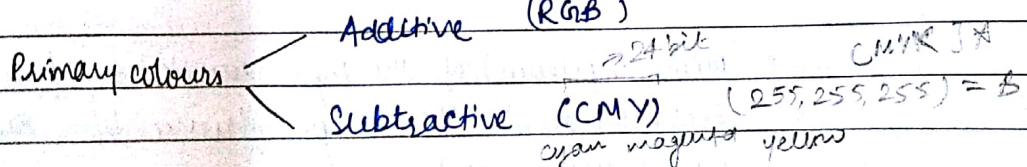
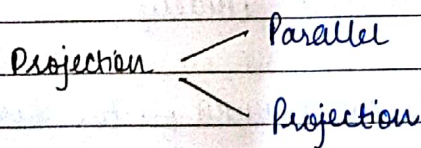
- ✓ • Heam and Baker
- 100% * • Xiang and Plastock
- 100% • Foley and Vandom
- Harrington

Raster graphics -

- Discrete
- Basic unit is point.
- Pixel gets farther on zooming (pixelated)

Vector graphics -

- Continuous
- Basic unit is line.
- Example - painting



$$\text{Grayscale} = (R + G + B) / 3 \quad \rightarrow 8 \text{ bit}$$

Line

$$y = mx + c$$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

