Image: 2d distrubiton of intensity or color
To process images, must:
– obtain images—capture the scenes via hardware
– represent images—encode them numerically

Large pinhole = blurry image
Small pinhole = sharp but noise (hard to collect enough light

Refraction – kırılma özelliği

Lenses – gather more light, need to be focus

Projection
Mapping from world to image
Not 1 to 1 (3d-2d)
How many

1. Perspective projection (human)
2. Orthographic projection (phone lenses)

Affine transformations
- Scaling
- Reflection
- Rotation
- Translation: add constant to x – koordinatları

Aperture: controls the lens opening / depth of field (arkası blur)
Exposure: light amount of sensor
Shutter speed: faster-less light-sharp – fast car

Shutter speed   Slower - blur

Short exposure- dark   medium exposure   long exposure- saturation

Image Representation

<u>Discretization</u>

-sampling(in space)   -quantization(in brightness)

Digital image: 2d dicrete function f

Pixel: smallest element f(x,y)

With alpha: png – not background

Color Spaces

Hue: rengin kendisi

Saturation: yüksekse cart

Lightness(value): parlak - light amount