

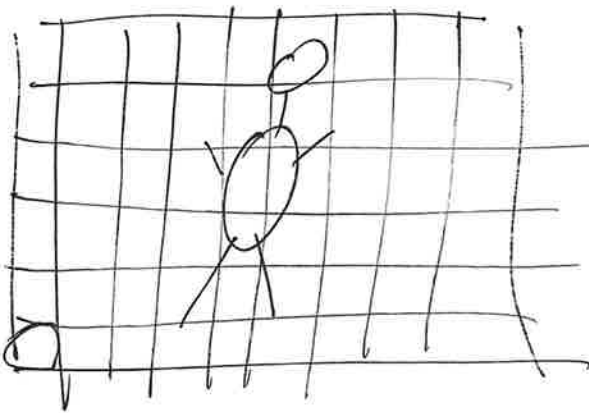
Digital Data

1/21/26

①

I) Images on a computer.

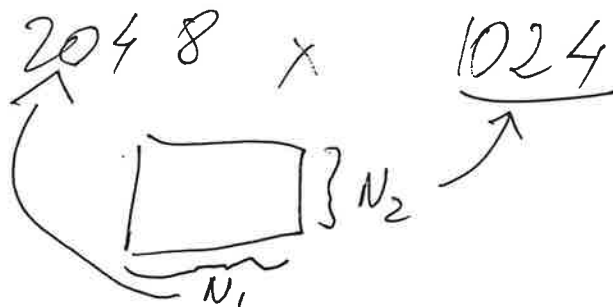
An image is a two dimensional object:



create a grid on the picture:
called a digital image.

Each cell in the digital image
is referred to as a pixel.

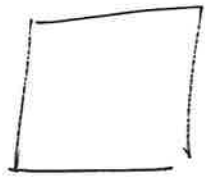
An image has a resolution, say



But what is a pixel?

(2)

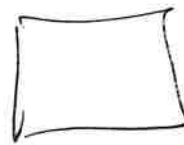
one cell
in the picture:



what do we store on a pixel?

3 options:

a) Binary representation for which
a pixel is either black
or white:



1 bit of
information.

b) Greyscale representation.

scale



fully black
0



Grey



fully white
255

c) Color for each pixel. ③

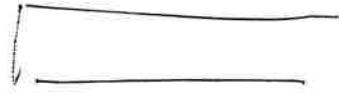
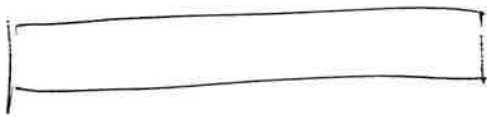
Any color is a combination of
3 fundamental colors: Red,
Green, and Blue.

Any color is

Some Red

Some Green

Some Blue



a number between
0 and 255

Converting the byte
information into a
hexa decimal
representation.

0... 255 → 0... FF

Example:

FF $\emptyset\emptyset$ $\emptyset\emptyset$

The order is always R G B :

FF $\emptyset\emptyset$ $\emptyset\emptyset$: red

$\emptyset\emptyset$ $\emptyset\emptyset$ FF : blue

00 00 00 : black

FF FF FF : white.