

Image - 2

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img. shape

(row , column , 3 )

hight

width

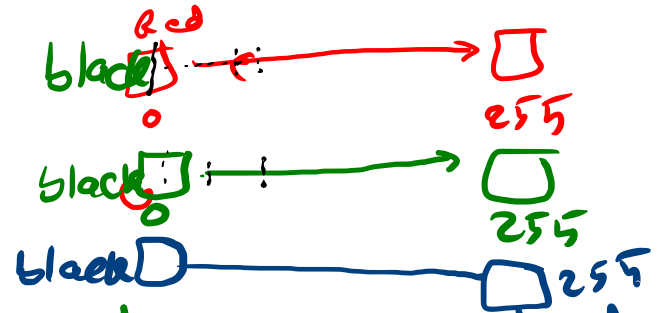


channel

(hight , width)

→ channel : 1

# Color Image



## first channel

Red

10	8	95	10
3	2	8	9
19	15	11	12
250	13	81	72
7	6	9	10

## second ch.

Green

95	14	0	2
81	9	15	18
71	72	73	75
108	19	13	12
209	23	25	25

## third ch.

Blue

6	16	92	73
51	41	43	45
200	21	169	163
253	50	10	11
12	13	14	15

RGB  
1 2 3

GRB

# Color to Gray

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R G B  
80 90 10

$$\text{gray value} = \underline{0.299}R + \underline{0.587}G + \underline{0.114}B$$

gray

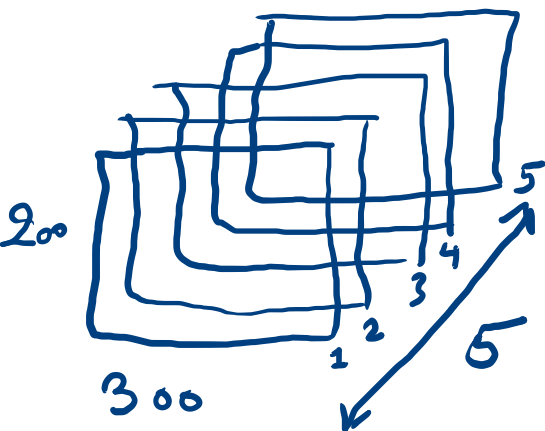
Color



تین رنگوں کی؟

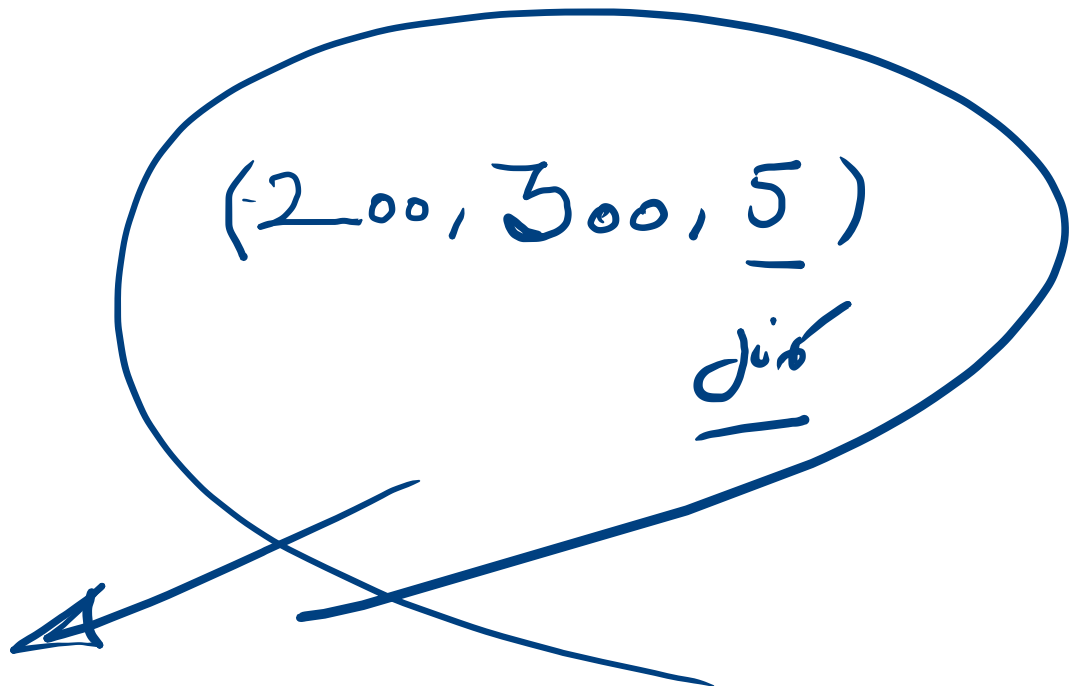
gray: 1ch, [0, 255]  
~~int~~ int

تین رنگوں کی → 3ch. ~> Color image.  
grey presentation.



1

3d



BGR 2 Gray

input

RGB 2 Gray

input

cv2.imread

BGR

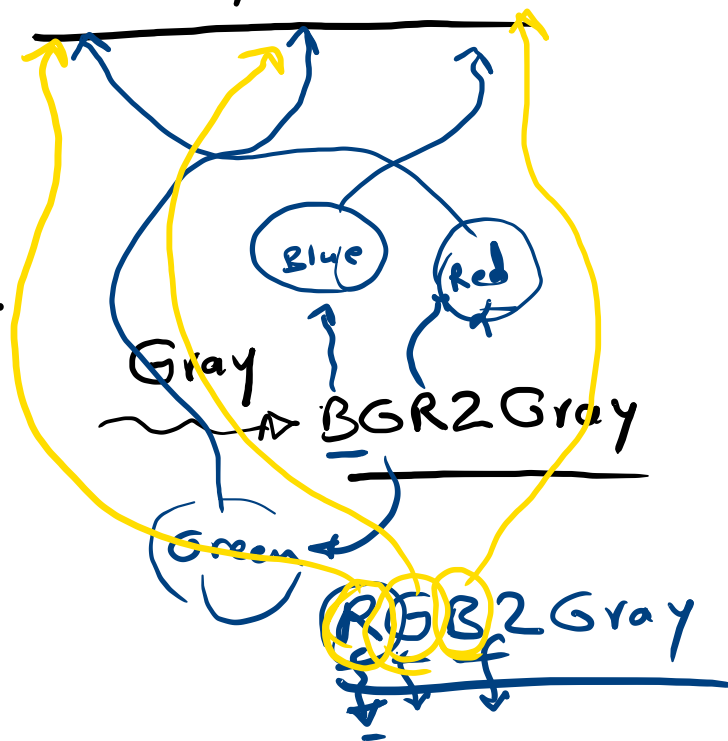
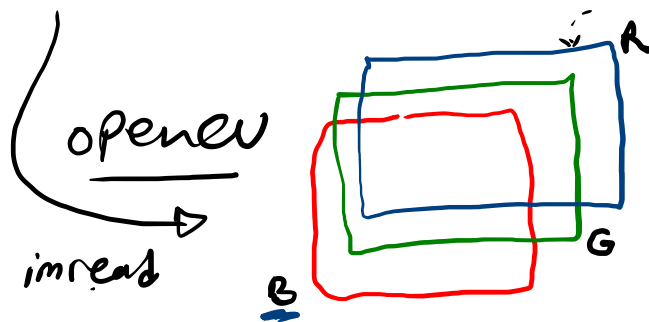
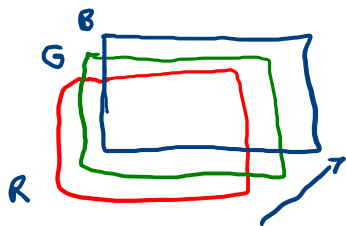
Gray

RGB 2 Gray

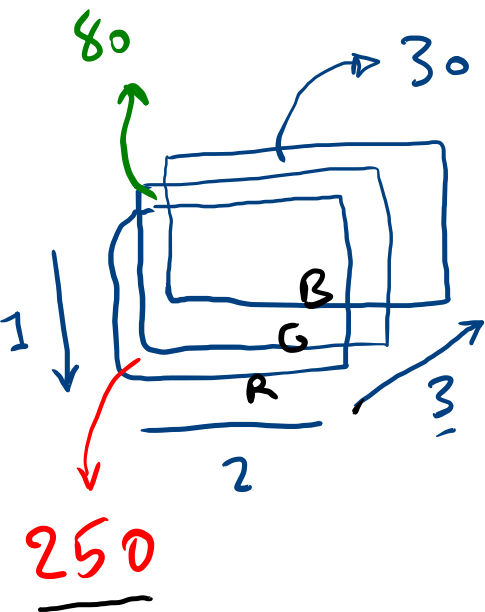
$$.2R + .5G + .1B$$

Real

Gray:  $.2R + .5G + .1B$







Color

$\begin{matrix} R & G & B \\ \hline (250, 80, 30) \end{matrix}$

$\begin{matrix} B & R & G \\ \hline 250 & 80 & 30 \end{matrix}$

$(\frac{80}{\downarrow G}, \frac{30}{\downarrow B}, \frac{250}{\downarrow R})$