HOW TO PROCESS COLOR IMAGES

Block Diagram:

Color Image $\xrightarrow{\text{I}}$ | Color Decomposition | $\xrightarrow{\text{Rin}}$ $\xrightarrow{\text{Gin}}$ $\xrightarrow{\text{Bin}}$ | Image Processing | $\xrightarrow{\text{Rout}}$ $\xrightarrow{\text{Gout}}$ $\xrightarrow{\text{Bout}}$ | Color Composition | $\xrightarrow{\text{Iout}}$

Example:

blue

red

orange

Red flower should be yellow

Image Processing

→ use imtool
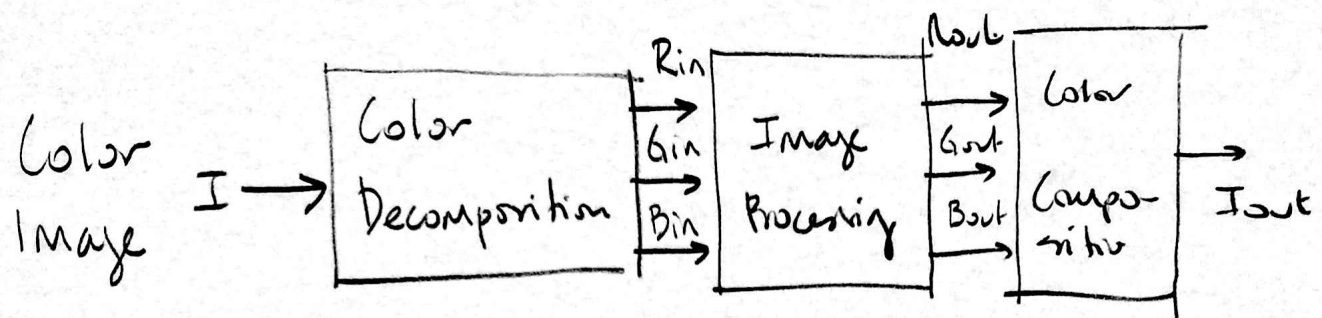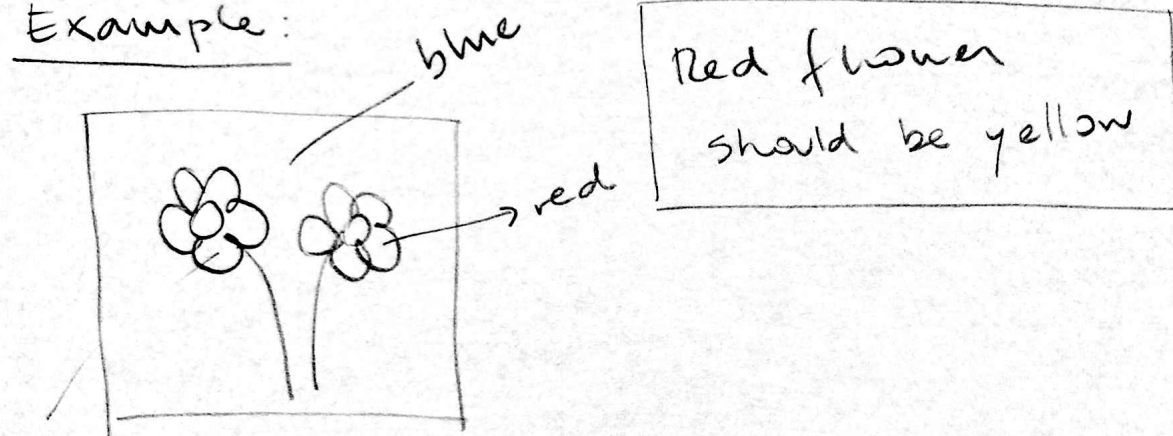
1) Segmentation:

$$J = \text{and}(\text{Gin} < 8, \text{Bin} < 8);$$

$$K = \text{bwareaopen}(J, 200);$$

$$S = \text{imdilate}(K, \text{ones}(7,7));$$

2) Color Change

Yellow :
Red = Green
Blue = 0

for $i,j \in S$

$R_{out}(i,j) = R_{in}(i,j)$

$G_{out}(i,j) = R_{in}(i,j)$

$B_{out}(i,j) = 0$

end