E2

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Lectura d'imatge i components de colors

```
im=imread("flowers.tif");
figure,imshow(im);
r=im(:,:,1);
g=im(:,:,2);
b=im(:,:,3);
figure,imshow(g),title("G");
figure,imshow(b),title("B");
figure,imshow(r),title("R");
```

G

B

R

LUT

```
mapaR=zeros(256,3);
mapaR(:,1)=0:255;
mapaR=mapaR/255;
% Abans de fer colormap, seleccionar la finestra activa
colormap(mapaR);

% Passar imatge a escala de grisos
grey=rgb2gray(im);
figure,imshow(grey),title("greylevel image");

% Passar imatge a CMY (invers)
cmy=255-im;
figure,imshow(cmy(:,:,1)),title("component cyan");
```

R

greylevel image

Components sense ombres (Normalitzat)

```
imNorm=double(im);
I = double(im(:,:,1)+im(:,:,2)+im(:,:,3));
imNorm(:,:,1)=double(im(:,:,1))./I;
imNorm(:,:,2)=double(im(:,:,2))./I;
imNorm(:,:,3)=double(im(:,:,3))./I;
figure,imshow(imNorm),title("image normalized");
```

HSV

```
imhsv=rgb2hsv(im);
h=imhsv(:,:,1);
s=imhsv(:,:,2);
v=imhsv(:,:,3);
figure,imshow(h), title("hue");
figure,imshow(s), title("saturation");
figure,imshow(v), title("value");

%HSV normalized
vNorm = v;
vNorm(:,:) = 0.7;
hsvNorm=cat(3,h,s,vNorm);
hsvNormRgb=hsv2rgb(hsvNorm);
figure,imshow(hsvNormRgb),title("HSV normalized");
```

hue

saturation

value

HSV normalized

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