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# Session 1

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## Manipulating image

```
% Read image
im = imread("Floppy.bmp");

% Grey intensity of pixel
im(67,123);

% Get range of matrix
im(67:70,123:130);

% Assign to variables
[rows,cols] = size(im);

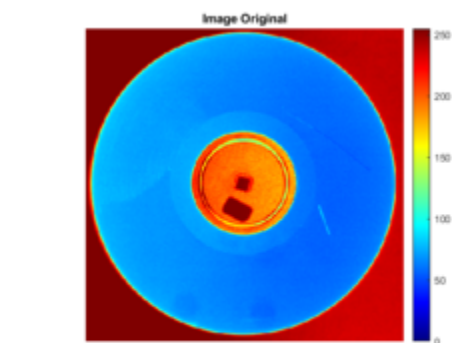
% Show image
imshow(im);

% run with imshow()
impixelinfo;

% run with imshow() and select line
%improfile;

% Put title to image
title("Image Original");

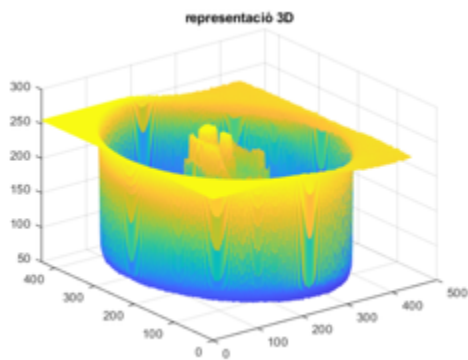
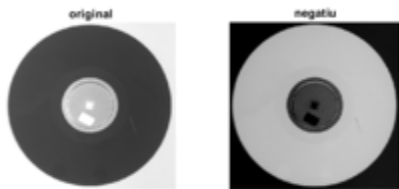
colormap jet;
colorbar;
```



Pixel info (X, Y) Pixel Value

## Subplots

```
figure;  
subplot(1,2,1),imshow(im),title('original');  
subplot(1,2,2),imshow(255-im),title('negatiu');  
  
figure, mesh(im), title('representació 3D');
```



## Generate random image

```
B = rand(256)*1000;  
  
% imshow() only show values between [0,1]  
figure,imshow(B),title('image random1');  
  
% change accepted range to [0,1000]  
figure,imshow(B,[0,1000]),title('image random2');  
  
% use the max and min of the image for the range  
figure,imshow(B,[],title('image random3');  
  
% write image  
imwrite(B,'random.png')
```

image random1



image random2

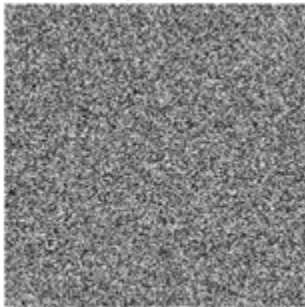
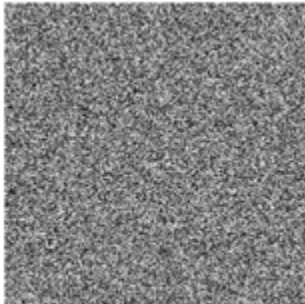


image random3



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