1. Read the image  **A = imread( ' FILENAME.FORMAT ' );**Example :  
   **I = imread('rice.png');**
2. Read index image (kids.tif)

**[X, map] = imread(' FILENAME.FORMAT ')**

1. Remark : The images used must be in   
   (C:\Program Files\MATLAB\R2011a\toolbox\images\imdemos)
2. Image size : **[m n]=size(I); % m : ?, n:?**
3. Show the image: **figure; imshow(I)**or

**figure;imshow(x,map)**

**or**  
**figure;imshow(I),colormap(map)**

1. *Binary image* **B=[ 0 1 0; 1 0 1; 0 1 0] ;figure ; imshow (B,'InitialMagnification','fit' )****%('InitialMagnification','fit') => ??**
2. *Grayscale image (Monochrome)****I=ones(4,1)\*[(0:6)/6] ;  
   figure ; imshow (I,'InitialMagnification','fit' )***
3. *Color image (Polychrome / RGB)*

***R=[0.5 0 1; 0 1 0; 1 0 0.5] ; % red  
V=[0.5 0.6 0; 0.6 0 0.6; 0 0.5 0.6]; % green  
B=[0.5 1 0; 1 0 1; 0 1 0.5]; % blue  
I=cat(3,R,V,B); % create a matrix with three layers (combination)***

1. *Indexed image*

***X=[1 2 3 ; 2 3 2 ; 3 2 1] ;* % index**

***Map=[0.5 0.5 0.5 ; 0 0 0.6 ; 1 0 0] ;* % RGB table**

***figure ; imshow (X,Map,'InitialMagnification','fit' )***

1. *Converting the image*

*-Indexed* => *intensity* (*Grayscale*): ***I=ind2gray(x,map)*** *-Indexed* => RGB: ***I =ind2rgb(x,map)*** *-RGB => Indexed:* ***[x,map]=rgb2ind(I)*** *-RGB =>* *intensity* (*Grayscale*): ***I=rgb2gray(I)***or ***I=αr+βg+γb***(α=0.2989 β=0.587 γ=0.114)  
*-Indexed* (*Grayscale*) => *Binary***: *Ib=(I>128)***; % si I(i,j)>255/2

1. Save the image

*imwrite(A, 'FILENAME.FORMAT')*

*or*

*imwrite(X,map,'filename,fmt')  
Example :  
I = imread('rice.png');  
imwrite(I, 'image.jpg') %*