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Homework 1

ECCS 4361.01

9/6/17

Task 1:

I divided the following two images pixel by pixel.

This is the result that occurred with the following Matlab Code.

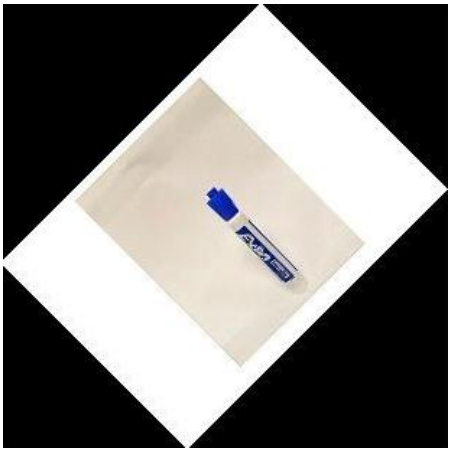
```
im=imread('Blank','jpeg');

im1=imread('Marker','jpeg');

im2=double(im1) ./ double(im);

imshow(im2);
```

Task 2:

This is the original image that is being edited.

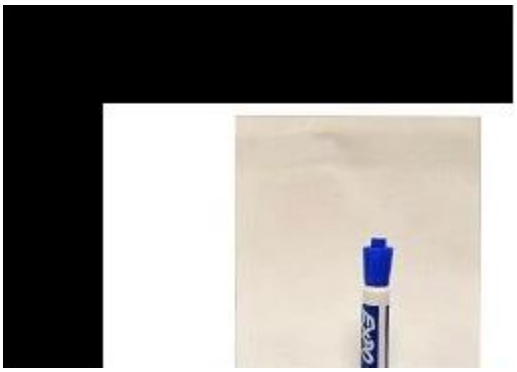
This is the image after being rotated in Matlab with the code.

```
im3=imrotate(im2,45);
imshow(im3);
```



This is the image after being translated 50 pixels with the Matlab code.

```
im3=imtranslate(im2, [50,50]);
imshow(im3);
```



This is the image after being rescaled by 50% with the following Matlab code

```
im3 = imresize(im2, .5);
imshow(im3);
```

Task 3:

This is the original marker image that is being edited.

With the following Matlab code I was able to change the image above to the following.

```
clear all;
clc;
itemp = imread('cs.jpg'); %read the image
i = itemp(:,:,1);
i1 = itemp(:,:,2);
rtemp = min(i);          % find the min. value of pixels in all the columns (row
vector)
rmin = min(rtemp);       % find the min. value of pixel in the image
rtemp = max(i);          % find the max. value of pixels in all the columns (row
vector)
rmax = max(rtemp);       % find the max. value of pixel in the image
m = 255/(rmax - rmin);   % find the slope of line joining point (0,255) to (rmin,rmax)
c = 255 - m*rmax;        % find the intercept of the straight line with the axis
i_new = m*i + c;         % transform the image according to new slope
i1_new = m*i1 + c;
figure,imshow(i);        % display original image
figure,imshow(i_new);    % display transformed image
figure,imshow(i1_new);
```

i

i_new

i1_new