

```
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```
IM1 = imread('leftharris.jpg');  
Image_1 = im2double(rgb2gray(IM1));  
Image1_F = figure,imshow(Image_1);
```

Image1_F =

Figure (1) with properties:

```
    Number: 1  
      Name: ''  
    Color: [0.9400 0.9400 0.9400]  
  Position: [403 246 560 420]  
      Units: 'pixels'
```

Use GET to show all properties



```
IM2 = imread('rightharris.jpg');  
Image_2 = im2double(rgb2gray(IM2));  
Image2_F = figure, imshow(Image_2);
```

Image2_F =

Figure (2) with properties:

Number: 2
Name: ''
Color: [0.9400 0.9400 0.9400]
Position: [403 246 560 420]
Units: 'pixels'

Use GET to show all properties



```
figure(Image1_F), [X1,Y1] = getpts;  
figure(Image1_F), hold on, scatter(X1,Y1,'filled','d','or');  
%figure ,hold on,imshow(Image_1),plot(X1,Y1,'or');  
%figure, plot(X1,Y1);
```



```
figure(Image2_F), [X2,Y2] = getpts;  
figure(Image2_F), hold on, scatter(X2,Y2,'filled','d','or');  
%figure ,hold on,imshow(Image_2),plot(X2,Y2,'or');  
%figure, plot(X2,Y2);
```



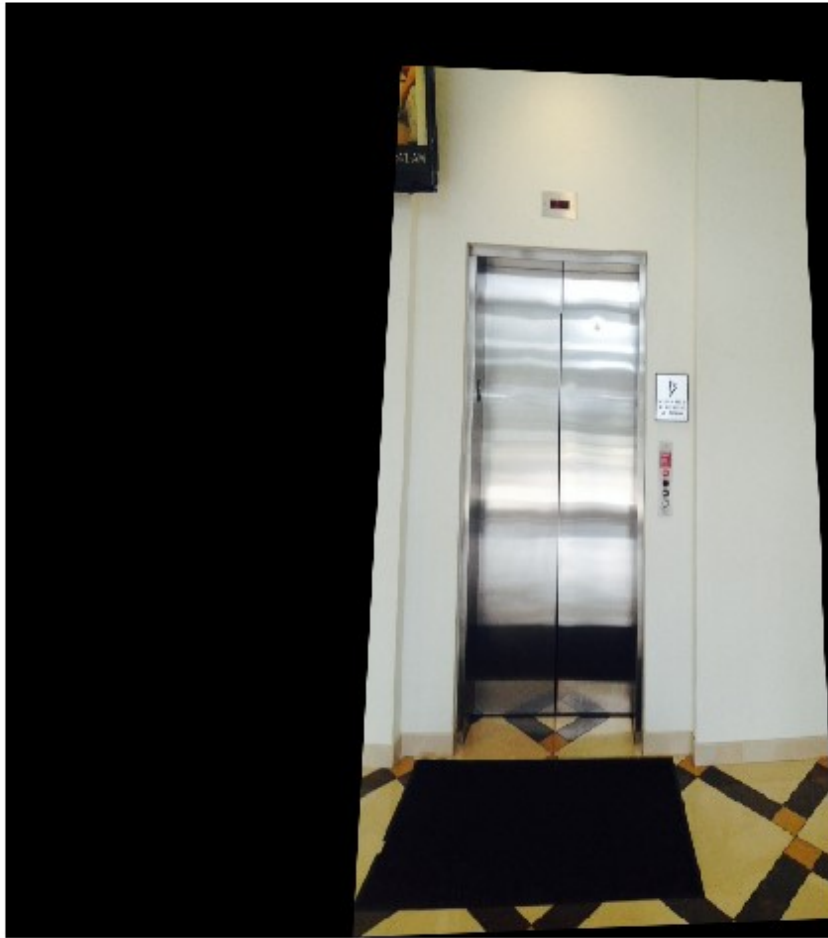
```
T=maketform('projective',[X2 Y2],[X1 Y1]); %maketform Function gives Homography as output i.e. 3 X3 Matrix given Four Points.  
T.tdata.T;
```

```
[Image_2T,Xdata2T,Ydata2T]=imtransform(Image_2,T); %Transforms Image2 according to 2D transformation by T.  
figure, imshow(Image_2T); % Display the image
```

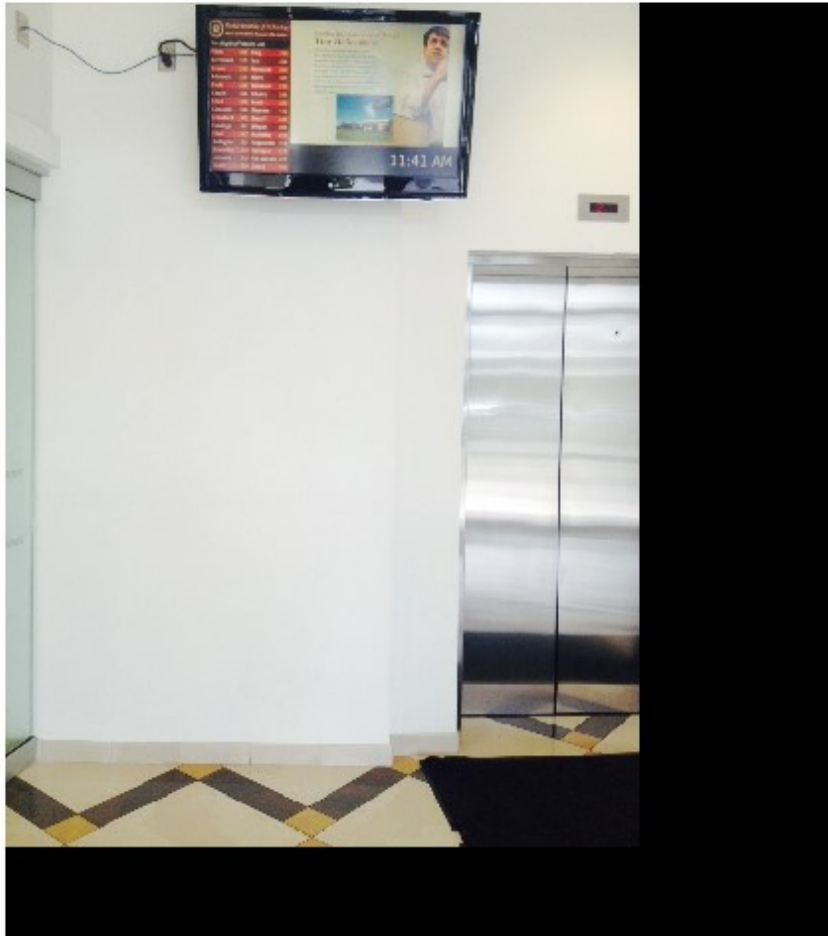


```
Xdata=[min(1,Xdata2T(1)) max(size(IM1,2),Xdata2T(2))];  
Ydata=[min(1,Ydata2T(1)) max(size(IM1,1),Ydata2T(2))];
```

```
IM2_T = imtransform(IM2,T,'XData',Xdata,'YData',Ydata); % Transform the Image2 according  
to XData and YData.  
figure, imshow(IM2_T); % Display the image.
```



```
IM1_T = imtransform(IM1,maketform('projective',eye(3)),'XData',Xdata,'YData',Ydata); %eye(n) returns N-by-N Identity Matrix with 1's on main diagonal & 0's for other's.  
figure, imshow(IM1_T)
```



```
IMAGE=IM1_T/2+IM2_T/2;  
figure, imshow(IMAGE)
```