

Implement Histogram specification method, by considering two gray images (any two from E3-1, E3-2, E3-3, E3-4)

```
Img = imread('E3-1.tif');

Ref = imread('E3-2.tif');

M = zeros(256,1,'uint8');
cdf1 = cumsum(imhist(Img))/numel(Img);
cdf2 = cumsum(imhist(Ref))/numel(Ref);

for r=1:256
    [p,s] = min(abs(cdf1(r)-cdf2));
    M(r) = s-1;
end

out = M(double(Img)+1);

figure(1);
subplot(231),imshow(Img),title('Original Image');
subplot(232),imshow(Ref),title('Reference Image');
subplot(233),imshow(out),title('Final Image');

subplot(234),imhist(Img),title('Original Image Histogram');
subplot(235),imhist(Ref),title('Histogram :Reference Image');
subplot(236),imhist(out),title('Histogram :Final Image');
```



