```
%主程序


clear all;

clc;

f = imread('F0004.bmp');    % 运行 10 遍程序，每次对一张图进行处理


s = [1,5,10,20];

for ind = 1:4

    dict(ind) = huffmandproduce(s(ind));

    c(ind) = im2jpeg(f, s(ind));

    img(ind,:,:) = jpeg2im(c(ind));

    cr_origin(ind) = imratio(f, c(ind));

    rmse_origin(ind) = CompareImages(f, permute(img(ind,:,:),[2 3 1]));    %permute 交换维度顺序，变成 img(:,:,ind)


    c1(ind) = im2jpeg_LPC(f, s(ind));

    img1(ind,:,:) = jpeg2im_LPC(c1(ind));

    cr_lpc(ind) = imratio(f, c1(ind));

    rmse_lpc(ind) = CompareImages(f, permute(img1(ind,:,:),[2 3 1]));


    c2(ind) = im2jpeg_considerzeros(f, s(ind));

    img2(ind,:,:) = jpeg2im_considerzeros(c2(ind));

    cr_zeros(ind) = imratio(f, c2(ind));

    rmse_zeros(ind) = CompareImages(f, permute(img2(ind,:,:),[2 3 1]));


    C(ind) = im2jpeg_fixeddict(f, s(ind),dict(ind).huffmanDict);

    Img(ind,:,:) = jpeg2im_fixeddict(C(ind),dict(ind).huffmanDict);

    cr_fixdict(ind) = imratio(f, C(ind));

    rmse_fixdict(ind) = CompareImages(f, permute(Img(ind,:,:),[2 3 1]));

end


%主程序
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%把值写入 excel 表格

xlswrite('a.xlsx',[cr_origin; cr_lpc; cr_zeros; cr_fixdict; zeros(1,4); rmse_origin; rmse_lpc; rmse_zeros; rmse_fixdict],4,'B2');

% 某张图的压缩比和方均根误差写到 excel 表格的一个 sheet 中，共 10 个 sheet

close all


for k = 1:4

    figure(k),

    ax(1)=subplot(2,2,1);imshow(permute(img1(k,:,:),[2 3 1]));

    ax(2)=subplot(2,2,2);imshow(permute(img2(k,:,:),[2 3 1]));

    ax(3)=subplot(2,2,3);imshow(permute(Img(k,:,:),[2 3 1]));

    ax(4)=subplot(2,2,4);imshow(permute(img(k,:,:),[2 3 1]));

    linkaxes(ax);

end
```

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