```
clc, clear, close all;
A = imread('pout.tif');
figure;subplot(231);imshow(A); title('Original image');
[row, col] = size(A); %Get no of rows and columns
%1D array for graylevels with max index as max graylevel
h = double(zeros(1, 256));

for a = 1 : row
    for b = 1 : col
        ind = A(a, b); %Access the index of the image
        ind = ind + 1; %Increment index as MATLAB indices start from 1
        h(ind) = h(ind) + 1; %Store in 'h' variable
    end
end

subplot(232);histogram(h); title('Original image histogram');
CDF = double(((1/(row * col)) * cumsum(h)));%Find CDF
subplot(233);plot(CDF);
s = round(255 * CDF);%Get the transfer or mapping function

for i = 1 : row
    for j = 1 : col
        index = A(i, j);%Get image indices
        index = index + 1;
        op(i, j) = s(index);%Get new indices
    end
end

subplot(235);imhist(uint8(op));title('Equalized image histogram');
subplot(236);imshow(uint8(op));title('Equalized image');
```