im = imread('spidey.jpg');

im = rgb2gray(im);

figure(1);

imshow(im);

title('Original image:');

freq = zeros(256,1);

ratio = zeros(256,1);

cdf = zeros(256,1);

equa = zeros(256,1);

aqua = zeros(256,1);

fhist = zeros(256,1);

[r,c] = size(im);

n = r\*c;

for i=1:r

for j=1:c

value = im(i,j);

freq(value+1) = freq(value+1) + 1;

end;

end;

figure(2);

histogram(im);

title('Histogram');

ratio = freq./n;

for i=1:256

sum = 0;

for j=1:i

sum = sum + ratio(j,1);

end;

cdf(i,1) = sum;

end;

equa = cdf.\*255;

aqua = round(equa);

for i = 1:r

for j = 1:c

blank(i,j) = cdf(im(i,j)+1);

end

end

figure(3),imshow(blank); title('Hist Image');

figure(4), histogram(blank); title('Equalized function Histogram');







