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Problem 1

```
A = imread('lena.bmp');
```

```
figure  
imshow(A);  
title('Problem 1,Part A')
```

```
% part b
```

```
grayed = rgb2gray(A);
```

```
figure  
imshow(grayed);  
title('Problem 1,Part B')
```

```
% part c  
grayed = my_grayscale(A);
```

```
figure  
imshow(grayed);  
title('Problem 1,Part C')  
imwrite(grayed, 'my_grayed.jpg');
```

Problem 1,Part A



Problem 1,Part B



Problem 1,Part C



Problem 2

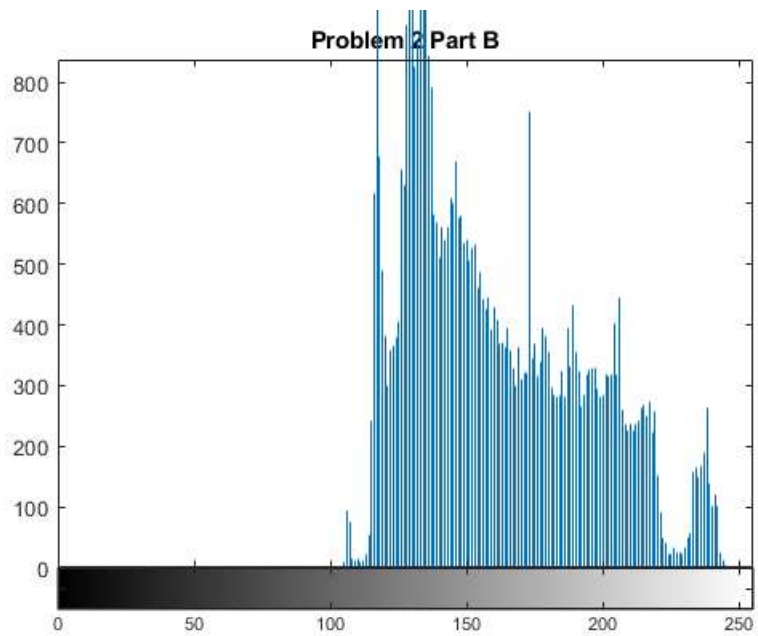
```
A = imread('lowcontrast.jpg');
```

```
figure  
imshow(A);  
title('Problem 2,Part A')
```

```
% Part B
figure
imhist(A)
title('Problem 2 Part B')
```

```
% Part C
enhanced = histeq(A);

figure
imshow(enhanced);
title('Problem 2,Part C')
```





Problem 3

```
I = imread('my_grayed.jpg');  
J = imnoise(I, 'salt & pepper', .05);
```

```
figure  
imshow(J);  
title('Problem 3, Part A')
```

```
% part b  
K = medfilt2(J);
```

```
figure  
imshowpair(J, K, 'montage')  
title('Problem 3, Part B')
```

```
% part c  
M = medfilt2(J, [5 5]);
```

```
figure  
imshowpair(J, M, 'montage')  
title('Problem 3, Part C')
```

```
% making the window size larger makes the image blurrier
```

Problem 3, Part A



Problem 3, Part B



Problem 3, Part C



```
function G = my_grayscale(a)
    G = 0.3*a(:,:,1) + 0.6*a(:,:,2) + 0.1*a(:,:,3);
end
```

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