WAES3106 Assignment 1

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Question 1 (a)

lena.jpg · peppers.jpg

Figure 1: Question 1 (a)

Question 1 (b)

lena and peppers

Figure 2: Question 1 (b)

Question 2 (a)

lena512colour.jpg

Figure 3: Question 2 (a)

Question 2 (b, c)

modified lena512colour

Figure 4: Question 2 (b, c)

A   Complete Code

```
──────────────────────── Initialization ────────────────────────
clc;
clear;
close all;
```

```
──────────────────────── Question 1 (a) ────────────────────────
% %%%%%Read image%%%%%

I1=imread('lena.jpg');
I2=imread('peppers.jpg');

% %%%%%Show image%%%%%
% show lena.jpg
figure, imshow(I1);
title('lena.jpg');
% show
figure, imshow(I2);
title('peppers.jpg');
```

```
──────────────────────── Question 1 (b) ────────────────────────
% %%%%%Construct image A%%%%%
A=[I1(:,1:122,:), I2(:, 123:end, :)];

% %%%%%Show image A%%%%%
figure, imshow(A);
title('lena and peppers');
```

```
──────────────────────── Question 2 (a) ────────────────────────
% %%%%%Read image%%%%%

A1=imread('lena512colour.jpg');

% %%%%%Show image%%%%%
figure, imshow(A1)
title('lena512colour.jpg');
```

```
──────────────────────── Question 2 (b, c) ────────────────────────
% %%%%%Duplicate image%%%%%
A2=A1;

% %%%%%Change colour band of A2%%%%%
A2(:,:,1)=A1(:,:,3);
A2(:,:,2)=A1(:,:,1);
A2(:,:,3)=A1(:,:,2);

%% Question 2 (c)

% %%%%%Show and save image%%%%%
figure, imshow(A2);
title('modified lena512colour');

imwrite(A2, 'newlena512colour.jpeg', 'jpeg');
```