Programming Assignment 3: Image Reduction and Merge with Frame

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The process of writing the code for the Image Reduction and Merge with Frame

Firstly, I read through the examples to know how the image reduction worked, specifically, the reduced and the merged, then I looked through the assignment, and found out the merged isn't that simple, the size needs to add the room for the frame.

Secondly, I started with the original and the reduced, the moved on to the merged which is the hard part for me, I added a whole series of merge into the code since some of the data is different, especially the width, height, and the size, after added the merge part, I began the part to draw out the picture on the four dimensions, which needed to know how it draw, which would be mentioned below.

Lastly, is the part for the frame, I needed to see where the frame should be, and calculate the scope of the width and height, and after this is finished, is the part where the colors R,G,B comes in, I needed to let it know which color according to the numbers scanned.

The problems I faced when writing the code, and the solutions

The first problem that I encountered is that when adding the merged part, I forgot to exchange some original and reduced to merge, and I forgot to free it which led to my result to be very strange, different, and even saying my picture is damaged.

The next question that I ran into is the one to four dimension, which after I investigated I found out that it runs the reduced image from bottom to top and from left to right, the only thing I needed to do is to see where it starts to run the image in each dimension.

Finally, is that I didn't quite get the merged size, and where I should make space for the frame, after looking at the picture for a while, I found out the logic is actually very simple, it is just that, you shou make room for the three

frame respectively by if so when meeting some demand it will draw the frame to where it should be.