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COSC10 PS-1
Quattrini

Discussion of PS-1
Static image (Baker) region detection and discussion
In creating my region growing algorithm, I looped through all the pixels. My first check sought to find out if the pixel was unvisited and if the pixel matched the color of the target color. I did this by checking if either of those conditions were negated first, the loop would continue. Otherwise, my algorithm created a new region for the pixel, created a new toVisit list, and made that pixel the current pixel. After, I looped through everything in the toVisit list, making the point I was working with referenceable and removing it from the list then looping through all of its neighbors using a check from the BlurImage program that made sure the neighbors were within the bounds of the program. If the neighbor was the right color and not yet visited, I added it to the toVisit list. This would loop through until the toVisit list was empty. This added to the global variable regions which I later used in my largest method.

I also chose to have my color match individually check each color channel with the max color difference since each color would have to individually be similar to the target color.

Webcam region detection, painting, and discussion
In handleImage(), I first checked to make sure that the target color existed as the rest of my code would rely on the region the target color yields. I then set up my finder with the images from the webcam. After, I execute the findregions methods using the target color from my handleMousePress method and execute the recolorImage method from there. I made a new ArrayList brush that holds the largest region from my finder object. Then I cycle through every point in that brush list in order to color the painting. Then I make a series of if statements using the display mode keys to determine which window is showing–webcam, recolored, or painting.