PS-1
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Discussions Related to Region-Growing:

We first worked on the colorMatch() function, since it was relatively straightforward. As given in the implementation notes, we compared the absolute value of the difference between each color channel with the threshold variable provided, i.e. maxColorDiff.

For the findRegion() function, we initialized a visited BufferedImage to help us keep track of which points had been visited. As we looped through the pixels of the image, we wrote conditions to make sure that we added unvisited points of the correct, matched color to the visit ArrayList. In the loop, we removed the last point from the list, adding its neighbors to the region list if they were the target color. All these regions were added to main region list, after a check with minRegion.

For the largestRegion() function, we iterated through region and returned the largest region.

On running RegionTest, the brown color of Baker is identified as the target color and thus, the entire region is painted with random different colors generated.

On running CamPaint, the mouse press determines the color; the largest region is found and acts as the brush on the white canvas. In the recolor mode, we can see, similar to RegionTest, the largest region painted with random colors generated.