

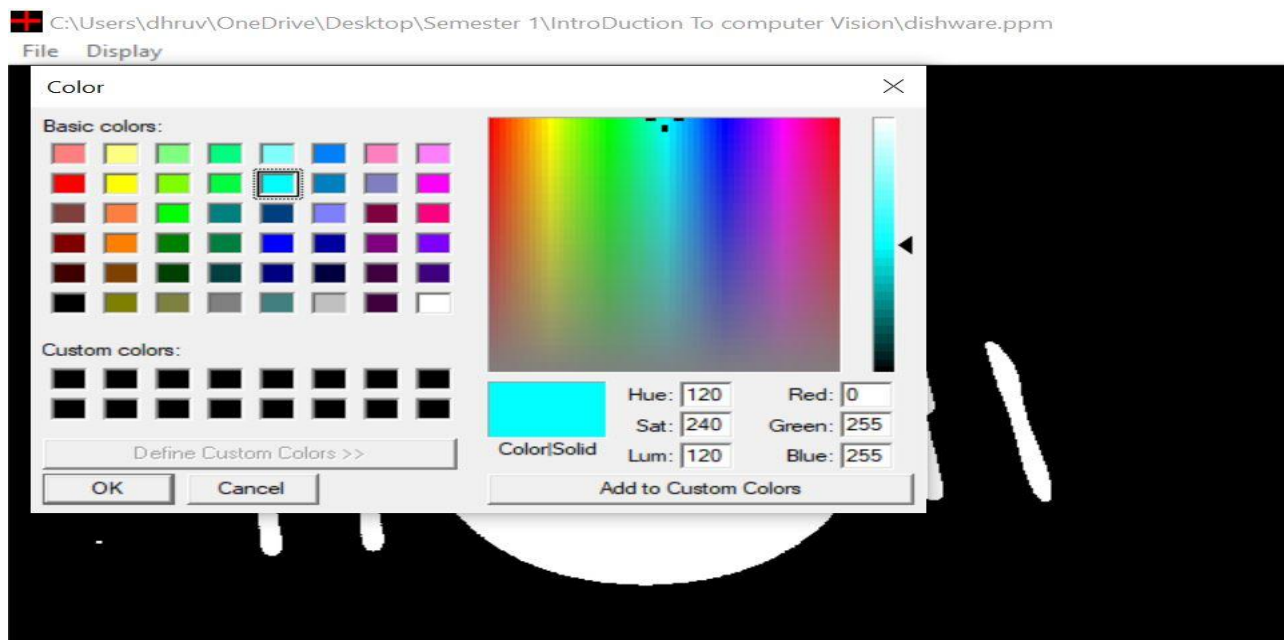
Name: Dhruv Thakkar
Course: ECE 6310
Lab #4

ECE6310-1,#4

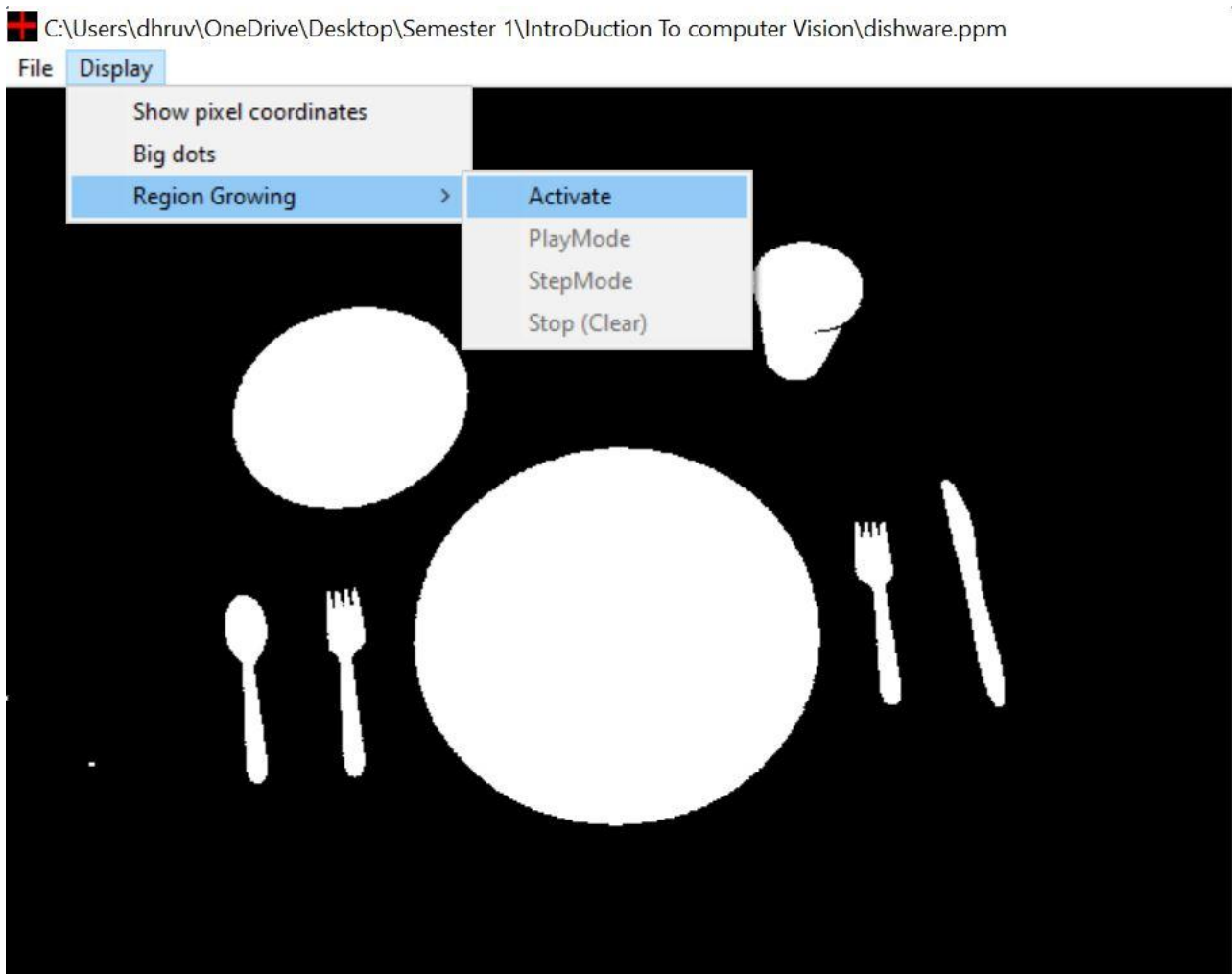
In this project the student was to implement interactive region growing. The student was provided with a built in Visual Studio project called “plus” which demonstrated several GUI and event handling techniques and region growing C code which demonstrated the region grow based on several predicates. The student was to use these two given pieces in order to complete the following requirements:

1. Program to visualize the region growing by coloring pixels as they join the growing region.
 1. Program should have a GUI option which allowed the user to select the color for pixels to join the region.
 2. Program should have an option that clears the result of a previous region grow, displaying the original image.
2. Program should have a menu option to grow the region in “Play” mode or in “Step” mode.
 1. In “Play” mode, a pixel should join the region each 1 ms.
 2. In “Step” mode, a pixel should join the region each time the user presses the key ‘j’.
 3. The program should allow the user to change between modes while a region is growing.
3. Program should use a dialog box to allow user to select values for two predicates for joining a region.
 1. First predicated is the absolute difference of the pixel intensity to the average intensity of pixels already in the region (To join, a pixel must be within this range).
 2. Second predicate is the distance of the pixel to the centroid of pixels already in the region (To join, a pixel must be within this range).
 3. Both predicates should be applied at the same time while growing the region.

GUI allowing user to choose a color from Color Palette:



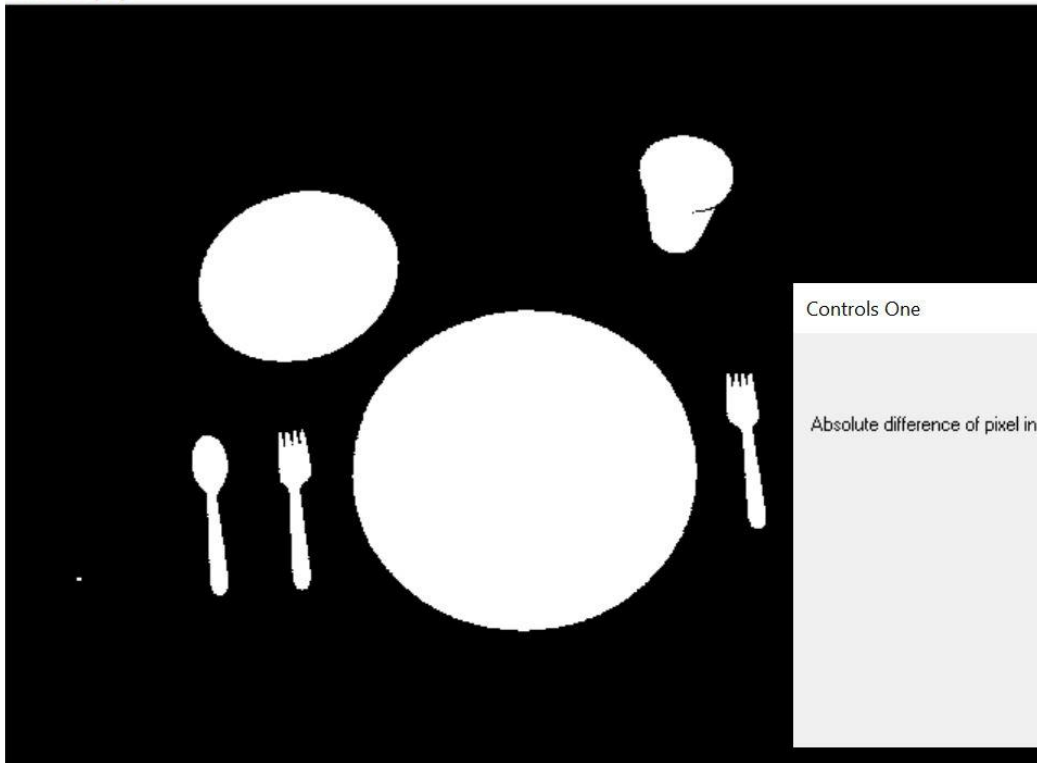
Program showing option Showing all the display tools and the Menu options:



Program Showing all the Dialog boxes

C:\Users\dhruv\OneDrive\Desktop\Semester 1\IntroDuction To computer Vision\dishware.ppm

File Display



Controls One



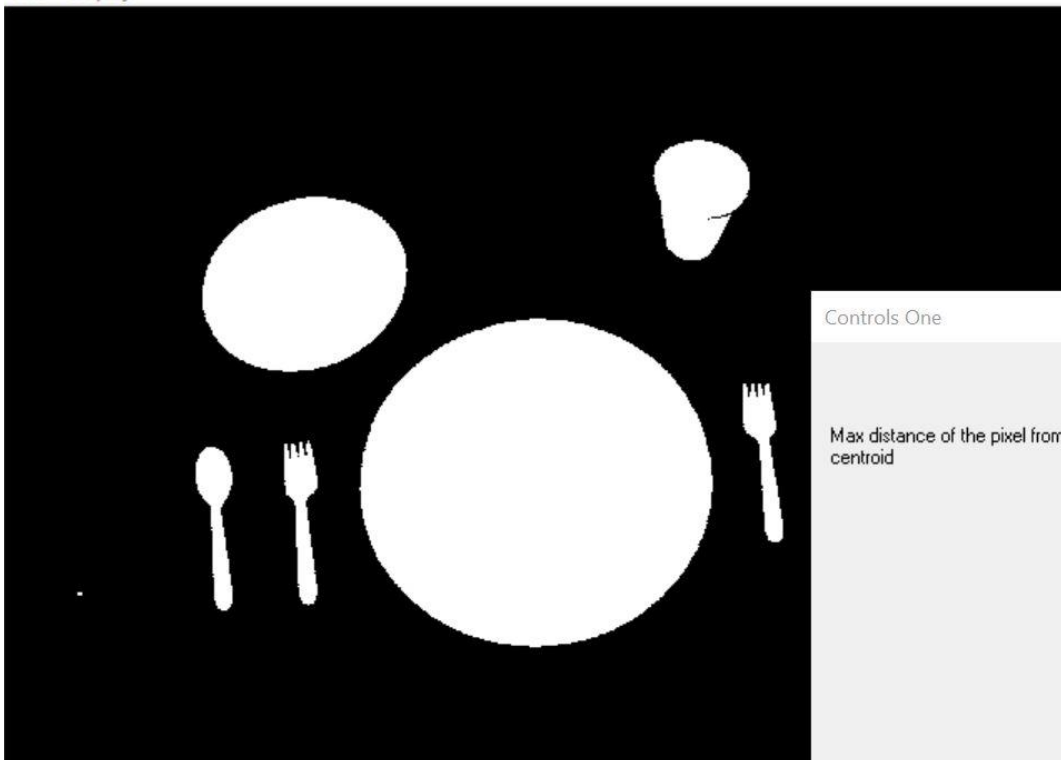
Absolute difference of pixel intensity

Ok

Cancel

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File Display



Controls One



Max distance of the pixel from the centroid

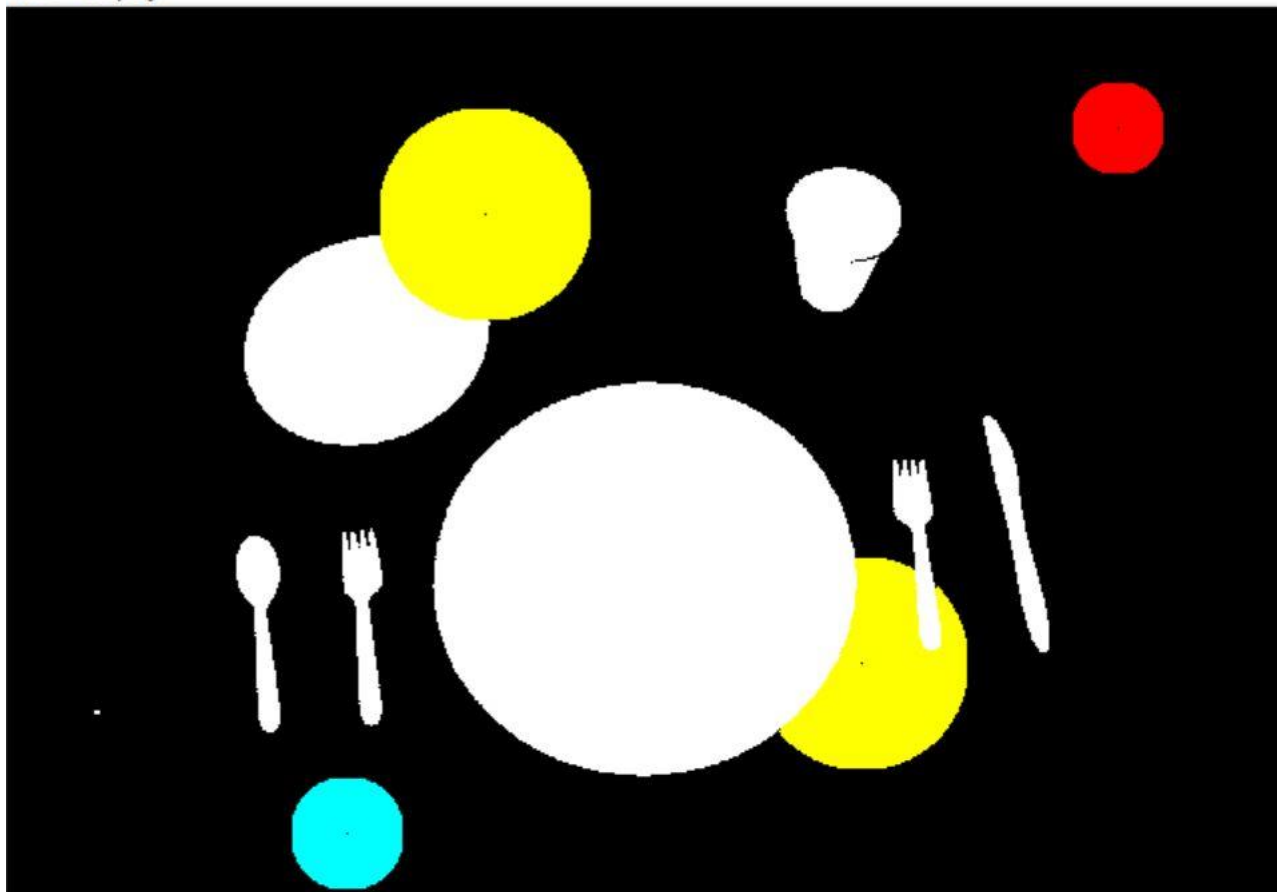
Ok

Cancel

Results for multiple region grown in an image with varying colours, centroid and pixel intensities as asked

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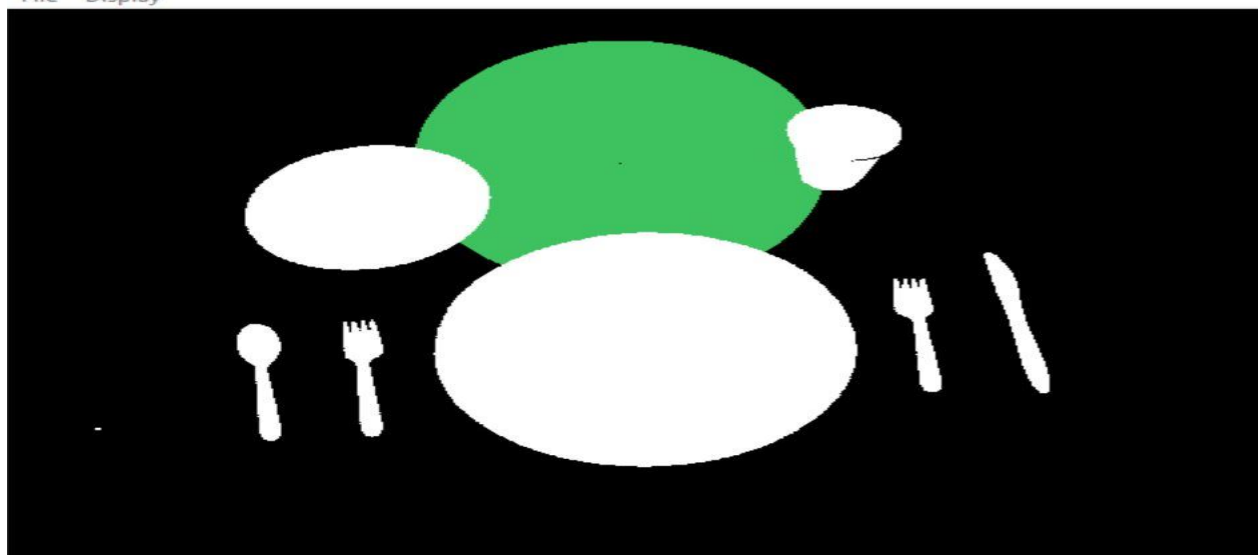
File Display



Results for region grown in an image with low intensity:

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File Display



Results for region grown in an image with high intensity:

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File Display

