Part A)
Write a script that produces results similar to those shown in Figure 1 below. The input image (shown on the left) is Fig0630(01)(strawberries_fullcolor).png from the image archive. Your script should produce three output images. All three will be similar to the image shown on the right in Figure 1. The first image is obtained by passing through all pixels within an RGB cube of width $W = 0.2549$ centered at $(0.6863, 0.1608, 0.1922)$. Pixels with RGB values outside the cube should be replaced by color $(0.5, 0.5, 0.5)$. The second image is created similarly, but all pixels within an RGB sphere of radius $0.1765$ centered at the same point should be passed through. The third output image should look as similar as possible to the first output image (the RGB cube filtered image), but all processing should be done in HSI space. You will need to develop your own filtering algorithm for the third output image. Your script should display the original image in one window and all three output images in separate windows.

Part B)
Write a script that reads in and displays Fig0637(a)(caster_stand_original).png. The script should produce one output image (in a separate window) that is the result of histogram equalization of the intensity plane in the HSI representation. Compare this to a second output image that is created by applying histogram equalization to each plane of the RGB representation.

Submit all source code in a zip or tar archive via the submission system.