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BSCS-5A

#131818

Lab 10 of DIP

**Code:**

**import** webcolors  
**import** cv2  
**import** numpy **as** np  
  
  
img = cv2.imread(**'objects.png'**)  
gray = cv2.imread(**'objects.png'**,0)  
ret3, segmented = cv2.threshold(gray, 40, 255, cv2.THRESH\_BINARY)  
kernel = np.ones((5,5), np.uint8)  
img\_erosion = cv2.erode(segmented, kernel, iterations=1)  
img\_dilation = cv2.dilate(img\_erosion, kernel, iterations=1)  
cv2.imshow(**'Segmentation'**,img\_dilation)  
ret, labels = cv2.connectedComponents(img\_dilation)  
  
*# Map component labels to hue val*label\_hue = np.uint8(179\*labels/np.max(labels))  
blank\_ch = 255\*np.ones\_like(label\_hue)  
labeled\_img = cv2.merge([label\_hue, blank\_ch, blank\_ch])  
cv2.imshow(**'labeled.png'**, labeled\_img)  
  
*# cvt to BGR for display*labeled\_img = cv2.cvtColor(labeled\_img, cv2.COLOR\_HSV2BGR)  
  
*# set bg label to black*labeled\_img[label\_hue==0] = 0  
cv2.imshow(**'labeled.png'**, labeled\_img)  
  
cv2.waitKey(0)  
cv2.destroyAllWindows()

**Screenshot:**

