Image Understanding and Processing (OpenCv-Python)

Lab Exercise – 11

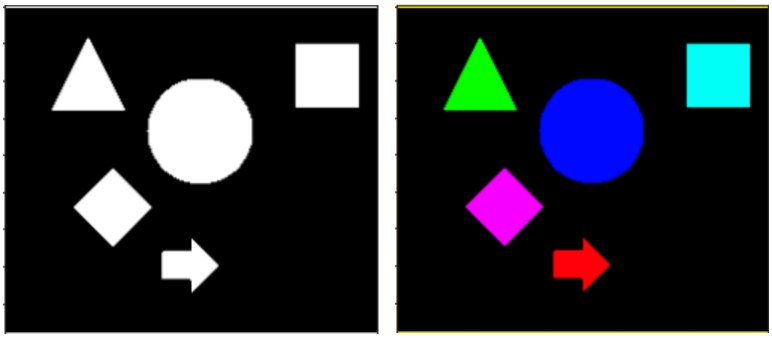
Year 4 **Semester 1, 2024**

Goal

- Apply connected component labeling using cv2.connectedComponents() function in OpenCV
- Fill holes in an image using cv2.floodFill() function in OpenCV

Exercise 01:

Connected Component Labeling is used in computer vision using binary images to detect connected regions. This solves the problem of finding out parts of the image that are connected physically, irrespective of color. The Connected Components also known as Blobs can be counted, filtered and tracked. Below shown are a few examples of Connected Component Labeling. Try to obtain the outputs below.



Exercise 02:

In the process of image segmentation, due to the instability of the algorithm or the image quality, image holes will appear. At this time, the holes in the image need to be filled. The flood-fill algorithm can be used to label objects in binary images. Try to obtain the output below.