

IMAGE PROCESSING-1

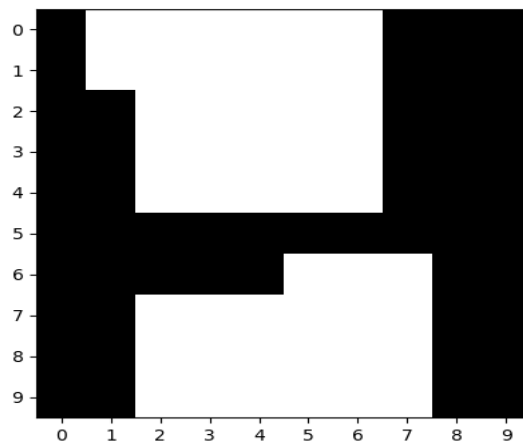
ASSIGNMENT-2

Instructions:

- Question 1 is compulsory for all to solve. Questions 2 and 3 are to be done according to the assigned group.
- Write an algorithm illustrating the steps taken to solve each of the questions clearly.
- Write the necessary codes on the Google Colab platform.

Questions:

1. In the given image below: (20)
 - Identify the different connected components by assigning unique colors to each identified component.
 - Display the perimeter of each of the identified components.



2. From the given set of images, design a generalized algorithm to: (30)
 - Extract blood vessels.
 - Sharpen the blood vessels.
 - Determine a binary mask for the blood vessels.
3. From the given lung CT images,
 - Extract the lung portion with the help of the corresponding lung mask provided.
 - Enhance the pixels corresponding to the artifacts present in the extracted lung region.(30)