Assignment 2

Consider a set of attached bilevel images, where a foreground pixel has the value 255 and a background pixel 0. Compute the following on these images.

1. Extract components using the chamfering algorithm and label them uniquely with a unique and distinctly perceptible color. Save the labelled color image in any standard image format.
2. Implement the cotour following algorithm for extracting the sequence of points for each of the component in an image. Save the contour extracted image in any standard image format.
3. Implement any one of the following polygonization algorithm to represent each component of an image by a simple polygon. Show the polygons by a different colors overlayed on the contours with vertices marked by small enclosing circles of a distinct color.
   1. Minimum Perimeter Polygon (MPP)
   2. By computing Approximate Digital Straight Line Segments (ADSS) and merging them.
   3. Iterative splitting of a curved segment in two halves.

Submit your programs, output files and a readme instruction for running them in a Zip folder.