CS5190 Spring 2022 - Assignment 2

Total points: 25

Due date: Monday, April 18, 2022

(25 pts) **Task: Contour Detection**

Figure 1 shows a given image of size 812 by 639 which consists of many different characters. When you download this assignment, you could find this image "fig1.jpg" in the folder.

In this assignment, you're asked to use OpenCV functions to **find contour of each character**. Figure 2 shows an example of the expected result. You are allowed to use any OpenCV functions for this task.

Please note that the given input image has a rectangular box, as indicated in Figure 3. **The expected result should NOT include the contour of this rectangular box**. (Hint: sort the list of detected contours based on contour area, and exclude the contour of the rectangular box)

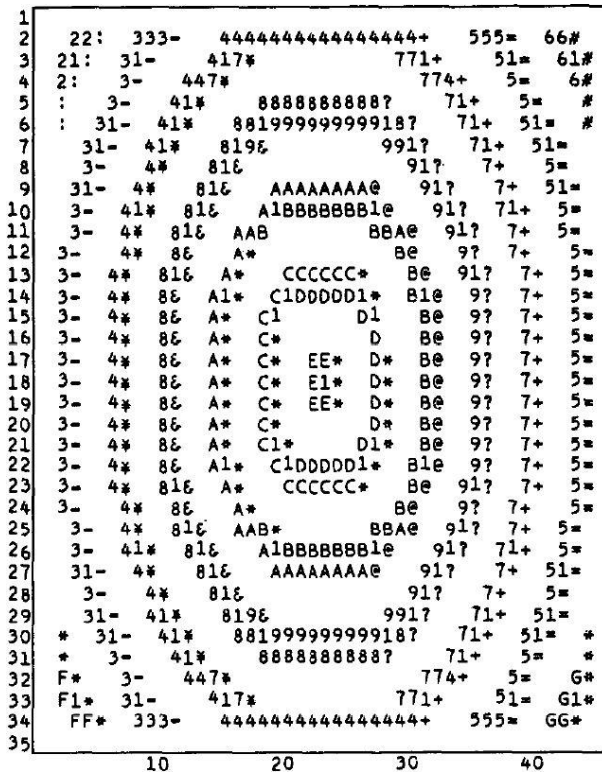

Figure 1. Input Image

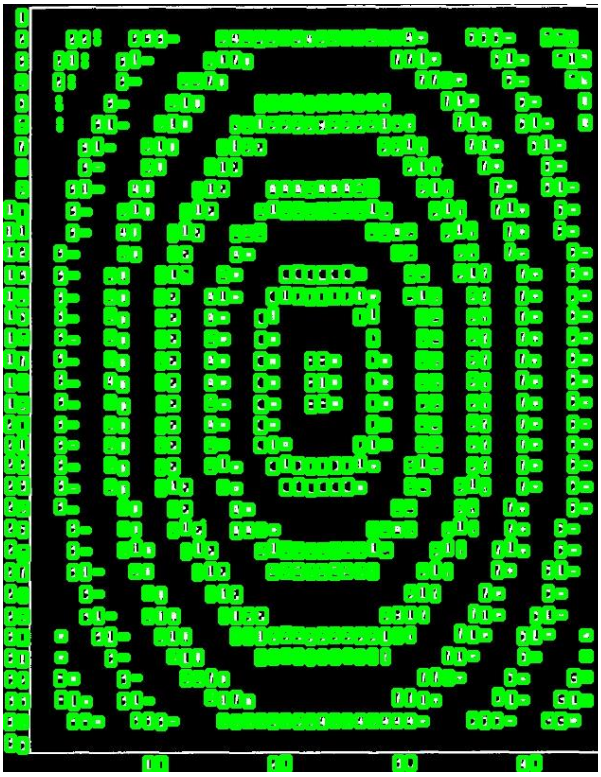

Figure 2. Expected Result

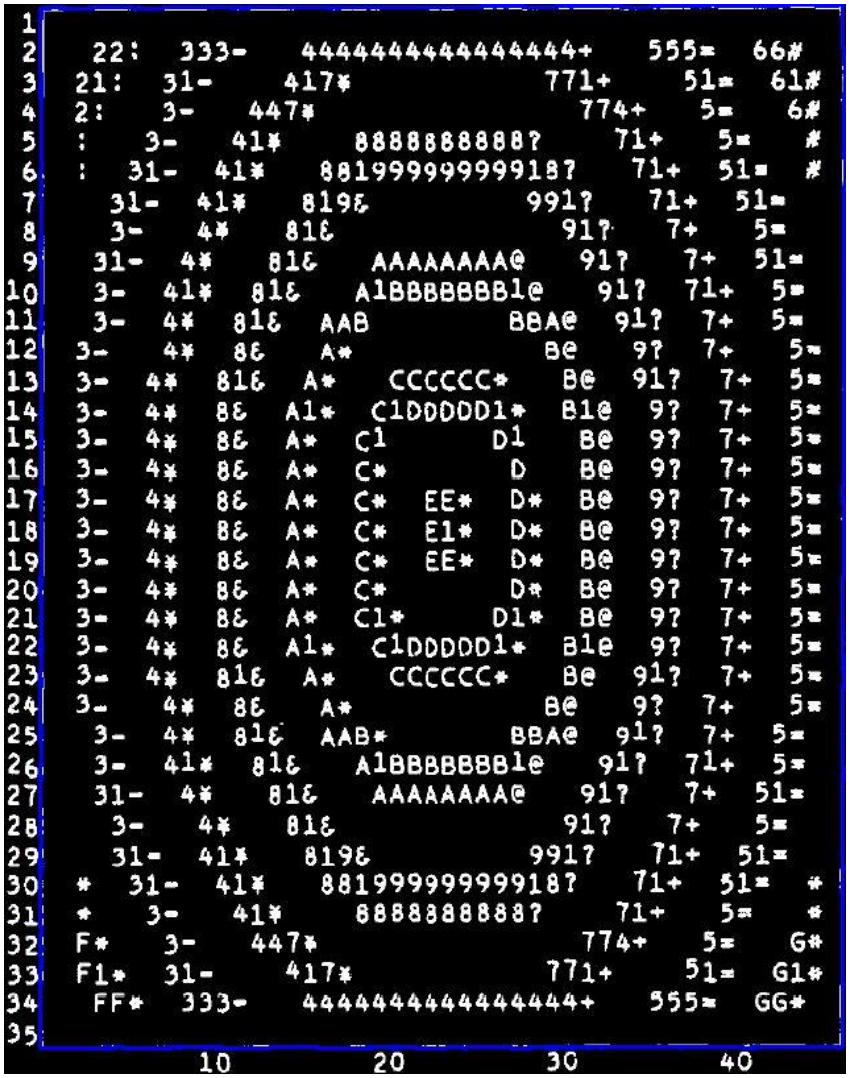

Figure 3. The rectangular box in the given input image.

What to Submit?

1. Python source codes **in ".ipynb" format**. Please note that
   a. don't use .py format
   b. use **relative file paths** to load (save) images from (to) disk.
   c. comment some important code lines,
2. Input images used.
3. Output images generated.
4. Please zip all documents as yourname_assignment2.zip and submit it to Canvas.