MCTE 4323 MACHINE VISION: QUIZ 2 (20 marks)

Name :
Matric No:

Assume that you are working in a company that produces bricks for edutainment. As a machine vision engineer, you are required to build an algorithm which is able to automatically <u>calculate the number of objects</u> in each batch prior delivering them to packaging house.
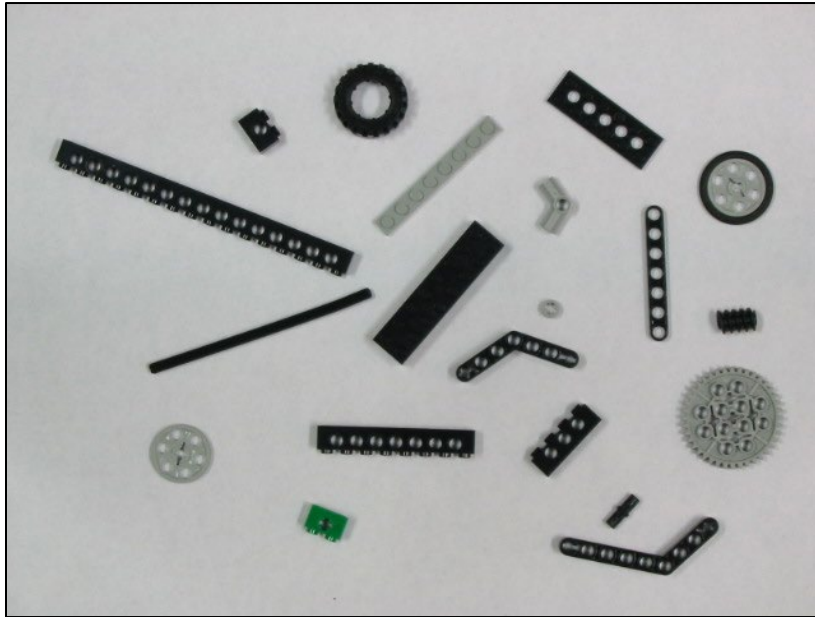

Figure 1 lego1.png.

Specifically, your task is to perform morphological image processing operations so that you get the correct count of the number of objects present in the image lego1.png (refer Figure 1).

1) Write a Python script that reads the image 'lego1.png', binarizes it, and then performs the necessary morphological operations to print out the correct number of objects in this image. **(10 marks)**
2) Write a comment at each important code line to describe the operation. **(5 marks)**
3) Briefly describe how the algorithm works and make a flowchart to visualize such procedure. **(5 marks)**

To submit this quiz, please upload your code file written in jupyter notebook on your personal GitHub (**create a special folder named "QUIZ 2"**). Make sure that all questions are combined in a *single* notebook. You can then submit the link of your GitHub account and the assessment will be fully based on the items deposited in that link.