Programming assignment 2.

Due date: Wednesday, September 9, 2021 at 11:59pm

Remember:

- ✓ You can look up all the functions in matlab by typing help/doc in the command window. (e.g. doc imread)
- ✓ "clear": removes all the variables from the workspace
- ✓ "who": gives the list of variables
- ✓ "whos": gives the list of variables, their sizes, and types

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During the lecture we used three built-in functions in MATLAB:

- ✓ Thresholding function: "im2bw"
- ✓ Removing objects (connected components) with fewer than some fixed pixels: "bwareaopen"
- ✓ Labeling connected components: "bwlabeln"

Choose one of these functions and implement it yourself.

(**Note**: if you are using python, and do not understand them, simply google e.g. "im2bw in MATLAB" and read the instructions of these functions. You then can implement them in python.)

1. Segment the given rocks in "colorful rocks 2.jpg" image
2. Plot the result and then save the resulting image as png.
3. Count the total number of the gray rocks in the image and print the result.
4. Calculate the area of each gray rock and save the result in a file. Explain how you did that.
5. Estimate the center of each gray rock and plot the image with red stars on the calculated centers. Explain how you found the centers.
6. Upload a pdf file of your code, your answers to question 4 and 5, and the resulting images.

Extra Credit: Instead of implementing only one, implement two or more of the mentioned functions above. Please make sure to mention how many you have implemented in your pdf file. 😊