Computer Vision SBE 404B

Assignment 2: Edge and boundary detection (Hough transform and SNAKE)

Due time: March 21st, 11:59 pm

For given images (grayscale and color)

A) Tasks to implement

1) For all given images; detect edges using Canny edge detector, detect **lines** and **circles** located in these images using Hough transform (if any). Superimpose the detected shapes on the images.

2) For given images; initialize the contour for a given object and evolve the Active Contour Model (**snake**) using the **greedy algorithm**. Represent the output as chain code and compute the perimeter and the area inside these contours.

B) Report all of the above to TA's (One Zip file including report, codes, results, etc).

Notes:

1. To make your submission:
   1.1. create zip folder that contains:
      1.1.1. m.File for you code.
      1.1.2. Pdf Report (see note 3).
      1.1.3. Any images or necessary attachments to make your m.file work.
   1.2. Rename your compressed Folder by your group name and the task number like : *Group#1Task#2*
   1.3. Upload your zip folder on : submission Link

2. The report should contain :
   2.1. Details about "how to use your code" to produce the snapshots that you would provide
   2.2. A snapshots shows how your code works

3. You can use built-in functions /or build your own functions
4. In cases of copying: both reports will be deducted in marks. In case of exact project and/or report: Both will be cancelled.