

## Homework – Image Processing

1. Write a C program (using Code Blocks) to read a RAW image file (e.g. cameraMan.raw) and outputs the inverse (i.e. a negative).
  - a. Code Blocks C program. Be sure to comment sections of your code to explain how your algorithm works (5-points)
  - b. Include both the original and processed image files. You can cut-and-paste these figures into your DOC/PDF document (RAW files not needed) (5-points)
2. Use Pixelformer to create a 16x16 image of a white ball on black background and use IrfanView to create an equivalent RAW image.
  - a. Show hand-calculations for your images area and centroid (10-points)
  - b. Code Blocks C program. Be sure to comment sections of your code to explain how your algorithm works (5-points)
  - c. Screen output image grab showing results of your C program's calculation of area and centroid. Contrast this result with your hand calculations (10-points)
3. Using cameraMan.raw as input, create an output image with a white box (rectangle height and width are the same), centered in the image.
  - a. Code Blocks C program. Be sure to comment sections of your code to explain how your algorithm works (5-points)
  - b. Include both the original and processed image files. You can cut-and-paste these figures into your DOC/PDF document (RAW files not needed) (5-points)