Dear All,

As discussed in the class, we are going to solve problems related to the topics covered in the digital image processing course. I have divided the topics in two groups i.e., Group 1 and Group 2. Each group is assigned the following topics:

Group 1 Topics:

Basic Image Operations (SNR, entropy, contrast/brightness etc.)
Image neighborhood operations (Linear/Non Linear, Mean/Median, Unsharpmasking etc.)
Frequency Domain Filters (High Pass/ Low Pass filters etc.)
Image Restoration (Restoration Models, Noise Modeling etc.)
Morphological Image Processing (Morphological algorithms, region filling, boundary extraction etc.)
Image segmentation using LoG Operator, and using Global Thresholding method.

Group 2 Topics:

Point Transformations (log transform, power law transform etc.)
Image neighborhood operations (Sharpening Using derivatives 1^{st} and 2^{nd} order)
Frequency Domain Operations (Basis images, Image conversion etc.)
Image Restoration (Filters for various types of noises, adaptive filtering)
Morphological Image Processing (Basic Operations, compound operations)
Image segmentation using Canny Operator, and using Otsu Thresholding method.

Note: If the last digit of your roll number is even then you have to prepare the Group 1 topics and if it is odd then you have to prepare Group 2 topics. For example, 18P-0210 shall prepare Group 1 topics and 18P-0211 shall prepare Group 2 topics.

I shall assign 5 grades weightage to this activity.

Best regards,

--Hafeez