A) Answer the following questions:

1. **Define:**
   a. **Digital image**
   b. **Digital image processing**
   c. **Pixel**
   d. **Image restoration**
   e. **Image segmentation**
   f. **Image compression**

2. **Make a comparison between:**
   a. **Low-, middle-, and high-level digital image processing.**
   b. **Sampling and quantization. With samples.**
   c. **Given image f of type uint8, what the difference between double(f) and im2double(f).**

B) Write MATLAB scripts that do the following tasks [use any popular image, tire, pout, cameraman, ...etc]:

1. **In one plot, simulate the gamma correction argument with different values. Then, comment on the plot. Consider f=0:0.01:1 and then apply imadjust(f,[],[],gamma).**
2. **In one plot, simulate the logarithmic transformation g = c*log(1 + double(f)) with different c values. Then, comment on the plot. G must be between [0,1]. Consider c=max(f)\log(1+max(f)) as one of your input and f=0:0.01:1.**
3. **In one plot, simulate the slope of Contrast-Stretching Transformations g=1./(1 + (m./(double(f) + eps)).^E), i.e., E value. Then, comment on the plot. Consider f=0:0.01:1 and m=0.5.**
4. **In one plot, simulate the middle point of Contrast-Stretching Transformations g=1./(1 + (m./(double(f) + eps)).^E), i.e., m value. Then, comment on the plot. Consider f=0:0.01:1 and E=4.**
5. **Repeat tasks 1-4 by replacing f with real image and then comment in your plots.**
6. **The book provides a function (intrans) that does all the intensity transformations in the book. Make your self familiar with it.**
7. **Be familiar with imtool function.**
8. **Make comparisons between histogram equalization methods provided in MATLAB. Comments in your results.**

~~Enjoy~~