

# Project #1

- **Requirement & Procedure**

Read a BMP file (gray level image) from hard drive, display it on the screen and rewrite it into BMP file back to hard drive. Reload the image again and do the following two operation.

- **Reduction of Gray Level Resolution**

1. Acquire an gray level image file (for example lena.bmp)
2. Reduce gray level resolution, generate resulting image.
3. Repeat step-2 with different quantization step sizes (i.e. 1, 2, 4, 8) to get another images.

- **Reduction of Spatial Resolution**

1. As same as the first step of above exercise.
2. Reduce spatial resolution, generate resulting image.
3. Repeat step-2 to generate images with different resolutions. (ex: 256\*256, 128\*128, 64\*64, 32\*32, 16\*16)