For this project you will create a MATLAB implementation of a histogram equalization function. The implementation should include a GUI capable of displaying an input image, its histogram, a histogram-equalized image and its corresponding histogram, and the transfer function used in creating the histogram-equalized image.

Your implementation should include code for allowing the user to select an input image, calculate the histogram, perform the histogram equalization process, and display the output results. Assume test images will be 256x256 8-bit gray scale (*.bmp format).

**ECE582 students only**: Include support for multiple size input images.