1. Run the program for histogram equalization provided by the instructor.
   a. Try the different modes on several images of your choice.
   b. Extend the program to work with color images.

2. Program as many improvements as you can to the simple greenscreening Matlab program provided by the instructor.

   Possibilities include, but are not limited to:

   a. Generate green screen shots that include you
   b. Find a better comparison metric. In particular, the color difference used in the example is sensitive to illumination changes.
   c. Make the program more robust. As it stands, it will crash if the position of the foreground image is not chosen correctly.
   d. Convert the script to a function that receives the image files as arguments
   e. Modify to require a single mouse-click (click on top left corner, keep aspect ratio of foreground image constant)
   f. The algorithm works by selecting for each pixel in the target image, whether to take from the foreground or background, which creates some strange artifacts at the edges of foreground objects. Modify the code so pixels near the boundary of the foreground object are obtained by a weighted average of foreground and background images.
   g. Allow (near) real-time performance.
   h. Automate the threshold selection

Write a report describing your methods and results, as stated in the syllabus.