Assignment #7: Using Gimp/ Photo Editing

Due on April 14, 2025.

Submit a single PowerPoint document to the Google Drive that includes all of the following objects:

1. **PowerPoint slide #1**: A video of my "solution" can be seen on the course "Assignments" page. The image of the bridge seen on the next page can be converted into a raster image by examining the .pdf version of this assignment on the course homepage, taking a screen shot or other screen snip, and then pasting the result into GIMP. Then:
   a. The detail structure in some of the roof pieces is too fine. Color those beams in (e.g., with black) so that they look like solid pieces.
   b. Add an alpha channel to your image. Then in small chunks, lasso-select all of the pixels that aren't part of the bridge and delete them to make a transparent background.
   c. Create a second, much larger blank image in GIMP ("File/New"). Make sure it has an alpha channel, then paste your bridge image into it. You'll probably see a variety of glitches caused by imperfect lasso-selecting. Try to fix them with a paintbrush or with more deleting, and also do your best to sketch in the missing lower-right corner of the bridge.
   d. Paste the final result into a PowerPoint slide. Don't close the image in GIMP yet. In PowerPoint, add your own blue sky background, some clouds, and some ground on each side of the bridge. Show a ravine or something below the bridge.
   e. Back in GIMP, make *another* copy of the bridge. Then on this copy, erase the *back* layer of the truss (i.e., delete those parts) so that only the front parts of the truss are still there. Then paste this as another new image into your PowerPoint. Zoom in and use the arrow keys to align this last image *perfectly* over top of the previous image. The arrow keys have more refinement when you are zoomed in more!
   f. Similarly edit the photo of the postal truck. Add an alpha channel, remove the background clutter, flip it horizontally, rotate it a little, use the perspective tool to match it a little better to the perspective of the bridge, and finally crop it to a reasonable region. Then copy it into your PowerPoint slide; rescale it in PowerPoint so it's a reasonable size.
   g. Find the "front" image of the bridge, and bring it to the front. Then animate the truck so that it appears to drive across the bridge, driving from right to left, passing behind the front layer of the truss but in front of the back layer.

2. **PowerPoint slide #2**: Download the picture of the vise in the machine ship from the Assignments page. Your goal is to show how the vise (the thing near the chair, in front of the anvil) is mounted to the workbench. Use GIMP to: rotate the image more properly, crop it properly, remove background clutter as much as possible, maybe sharpen the edges near the wood, adjust the brightness, and then rescale it so it isn't a bazillion pixels. Copy the result into PowerPoint. Add a single text box that does not overlap with the image which describes the repairs and choices you made.

3. **PowerPoint slide #3**: Wander into the Analyt, General, or Sophomore Lab space when there's no class meeting. Review the three lab choices to determine which is best. For whatever experiment is already set up, take at least 3 pictures of the necessary equipment as if you were going to create an online manual for how to do the experiment. You do not have to actually create the web page or write any manual text. Before taking the pictures, consider viewpoint, orientation, perspective, magnification, lighting and background clutter.
   Then, edit the images in GIMP for cropping, brightness, final clutter removal, and not having too many pixels. Past all three into 1 slide of PowerPoint, and then add at least 6 total "annotations" in PowerPoint (not in GIMP): (e.g., text labels, arrows, scale indicators etc.) as if this image was going to be part of a lab manual.

The first two images are from Wikipedia commons. The last is from Dr. McLean.