Program #5
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CS5720: Data Visualization
R. M. Parry

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1. Using the MRI dataset, write a program that produces a contour line using the basic marching squares algorithm:
   `https://en.wikipedia.org/wiki/Marching_squares#Basic_algorithm`

2. You can download the data here:
   `http://cs.appstate.edu/~rmp/cs5720/mri.zip`

3. The ZIP contains PGM files, one for each slice. The PGM images contain a simple text format that you can read in any language:
   `https://en.wikipedia.org/wiki/Netpbm_format#PGM_example`

4. As before, provide a bash script that executes it with the path to the CSV file provided on the command line. Usage should be like this:

   ```
   $ bash fig_mri_contour.sh /home/user/mri/14.pgm 40 fig_mri_contour.png
   ```

   The bash script runs your program using the provided file. For example, if you write a Python program the bash script might look like this:

   ```
   python fig_mri_contour.py "$@"
   ```

   If you decide to use R, it might look like this:

   ```
   Rscript fig_mri_contour.R "$@"
   ```

5. The program should produce a PNG with the name of the second argument: `fig_mri_contour.png` in the example above.

   Zip your program and submit it to asulearn.

   It should look a lot like this: