Rose-Hulman Institute of Technology
Department of Electrical and Computer Engineering

ECE 434 Embedded Linux — Winter 2324
Homework 1 — Mark A. Yoder

Etch-a-sketch

You are to write a simple Etch-a-sketch[1,2] program. The classic Etch-a-sketch has two knobs and a screen. The knobs control the *x* and *y* position of a pen on the screen. Your simple Etch-a-sketch will take an input that tells the pen to move up, down, left, right or clear (shake?). Your display is simply a grid of characters that show where the pen has been.

```
   0 1 2 3 4 5 6 7
0:     x x x x
1:   x         x
2: x   x     x   x
3: x             x
4: x   x     x   x
5: x     x x     x
6:   x         x
7:     x x x x
```

My example shows an 8 by 8 grid. Make yours able to do any size.
Use Python, it's already on the Bone.

[1] http://en.wikipedia.org/wiki/Etch_A_Sketch
[2] https://www.instructables.com/id/CNC-Etch-a-Sketch-and-Video-Player

Challenge: Try using curses.

1. Be sure your git repo is here[1], or I can't grade it.
2. Make me a collaborator on your repo, that way I can push comments back to you. My git ID is **`MarkAYoder`**.
3. If your code needs additional things to be loaded, put the commands in a file called **`install.sh`**. For example, tell me how to load **`pygame`** if you are using it.
4. Include `#!/usr/bin/env python3` (or whatever language you are using) at the start of your project and `chmod +x` it so it will execute from the command line.
5. Note compiler flags when needed.
6. Consider having your etch-a-sketch print out the instructions when it starts.
7. Be sure your name is on [2] and [3]. Don't just edit the web page, use git.

[1] See the Embedded Repos page on Moodle.
[2] https://github.com/MarkAYoder/gitLearn
[3] https://github.com/MarkAYoder/gitLearnFork/

What to turn in

1. Create a repository on https://github.com/

2. List your repository on the Embedded Repos link on Moodle. Please paste the **ssh** version of the link, not the **https** version.
3. Make a subdirectory in your github repository called **hw01**. (Not HW01 or hw1)
4. Put all your files in the directory, include a **ReadMe.md** that explains what your code does and how to use it.
5. Document your code. Be sure to include your name and the date in the comments.