LAB 01:
Drawing Shapes

Provided Files

- `lab01.c`

Files to Edit/Add

- `lab01.c`
- `Makefile`
- `.vscode`
    `tasks.json`

Instructions

`Note: Make sure to copy over your Makefile and .vscode/tasks.json from Lab00.`

In this lab, you will be completing TODOs to finish writing three functions:

- **TODO 1.0-1.1**
  void setPixel(int col, int row, unsigned short color)
    - Fills the pixel at the specified col and row with the specified color
- **TODO 2.0-2.1**
  void drawRect(int col, int row)
    - Draws a rectangle at the specified column and row
        - **You may NOT draw a square**. Points will be deducted from your lab grade if you draw a rectangle that has the same width and height.
    - May be any color, either filled in or not (your choice)
    - May be any (GBA appropriate) size
    - May NOT be hardcoded. You may not just call setPixel for every colored-in dot on your rectangle. You must use iteration to do so!
- **TODO 3.0-3.1**
  void drawLetter(int col, int row)
    - You can choose any capital letter (one of your initials or a random letter) to draw. At least one of the lines in your letter must be diagonal. Examples: A, Y, K, Z, V, W, etc.

- ○ Draws a letter at the specified column and row
- ○ May be any color
- ○ May be any (GBA appropriate) size
- ○ May NOT be hardcoded. You may not just call setPixel for every colored-in dot on your letter. You must use iteration to do so!

After writing the two functions, **call the drawLetter function two times and call the drawRect function one time in your main function,** with different parameters. The output of your program should look something like the following.
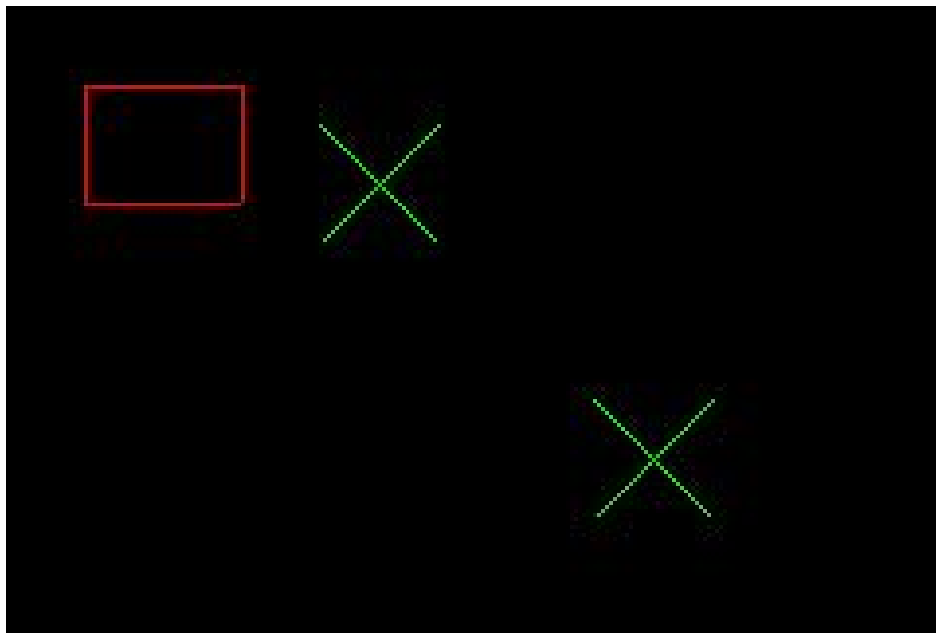
Your letters and your rectangle may be any size, shape (given the rectangle is not a square), color, rotation, or position you want, as long as we can see that you drew two letters and one rectangle. If you want, you can add parameters to the function to control color, size, or shape. After you have completed all the TODOs and your output looks correct, you are finished with the lab after you submit it.

Tips
- For-loops are really great for drawing lines
- The GBA screen size is 240 pixels wide and 160 pixels tall
- If you add parameters to your drawLetter function, you must change its prototype
- If you add parameters to your drawRect function, you must change its prototype

Submission Instructions

Zip up your entire project folder, including all source files, the Makefile, and everything produced during compilation **(including the .gba file)**. Submit this zip on Canvas. Name your submission Lab01_FirstameLastname, for example: "Lab01_GeorgeBurdell.zip".