Project Proposals

1. LED’s blink in random order. You have to push the keypad buttons in corresponding order. If you get the pattern right, the speaker plays a “cheerful” tune and the LCD shows how many you got right and how many you got wrong. If you get the pattern wrong, the speaker plays a “sad” tune and LCD increases how many you got wrong. You have a certain amount of time to insert the pattern on the keypad or else it will count as you getting it wrong. Best out of a certain number of patterns and you win if you get 80% right. (Ex: 10 patterns play, you get 8 right, then you win; 10 patterns, you get 6 right, you lose). 2 buttons will be used to start the game and to reset it.

Build-upons

1. Using an 8x8 LED matrix to show the patterns
2. Game logic of keeping track of points and checking for correctness of input from keypad
3. Using a different speaker to play the tunes

B) Stacker game

The goal of the game is to align rows of moving blocks on top of each other. As you go further, the moving row of blocks get smaller.

Build-upons

1. Using 16 x 8 led matrix to show stacking
2. Game logic of making sure LEDs are stacking correctly
3. Using a different speaker to play tunes

C) Simon Says

LCD outputs the instructions and player has to follow the rules.

Build-upons

1. Joystick will be used as an input source (Simon says move the joystick left then up)
2. Game logic of checking for input when there is no input and waiting a few seconds for if there is no “Simon”
3. Keypad will be used as a “drawing pad” (Simon says draw a + on the keypad, so user will need to enter numbers 84562 in any order)
4. Different speaker to output louder tunes

**Github Link**

https://github.com/mlips001/Custom-Project.git