SLOT MACHINE PROJECT

ECE 153B Project Proposal

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Overview:

We propose to create a slot machine that gives points if 3 figures match and keeps track of your score. This project will make use of multiple 8 by 8 LED matrixes to display the different figures scrolling down as well as an alphanumeric display that shows the score increasing and decreasing based on what figures match up and how often the player wins. The project will use the LPC joystick to start the spinning of the slot machine and use a button to reset the game.

Peripherals:

1. 3x 8 by 8 LED matrixes
2. 1x Quad Alphanumeric Display
3. LPC Joystick

Software Design:

An infinite while loop will control the program, and it will use GPIO interrupts for when the joystick lever is switched on. Once the joystick is triggered, the led matrixes will start the spin animation function. This function will display figures spinning downwards that eventually stop at a random figure. If the figures match at the end, it will trigger a specific interrupt that will either increase or decrease the score. At any point, the player can press a reset button that will reset the score and game.

Goals:

1. Successfully have lever start spinning animations.
2. Have interrupt successfully work if figures match up.
3. Successfully keep track of the score.
4. Cop at least an A- in class. Please.

Stretch Goal: Add background music throughout the game, spinning sound effects. and audio for when the player matches specific figures.

Group Responsibility:

Nathan will figure out how to get the lever to trigger the spinning animation. Edward will figure out how to get the spin animation to work for the figures. Ben will figure out how to keep the score working on the alphanumeric display panel.