

ECE153B - Project Proposal

Calculator - Interfacing a keypad and a display to LPC4088

Team:

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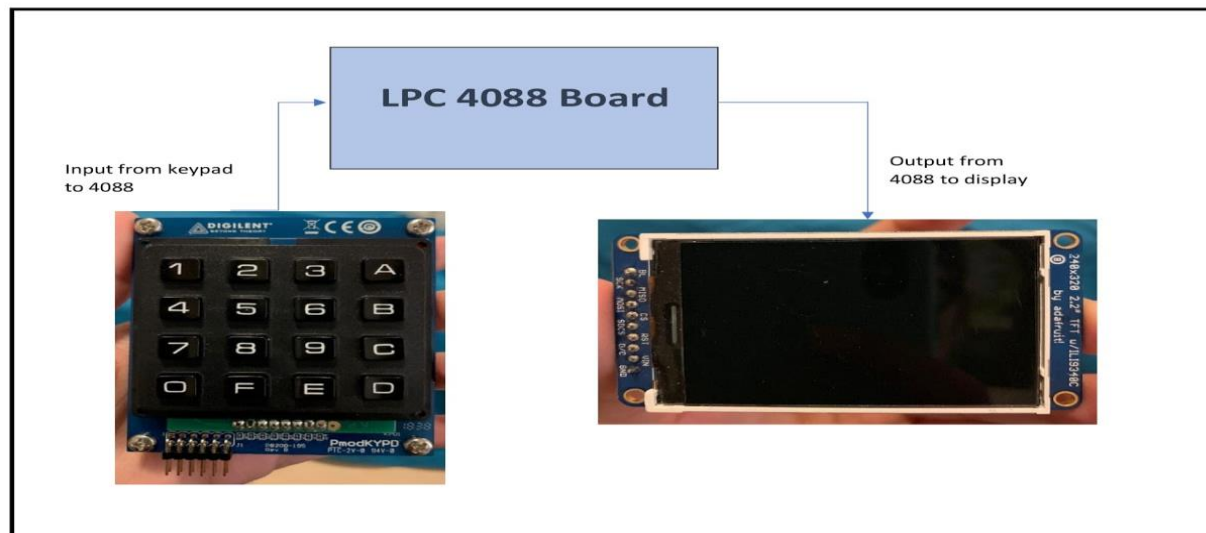
Overview:

Our idea is to build a simple arithmetic calculator or an input pattern recognizer by interfacing a keypad to the LPC 4088 Dev kit. The results of the operation are then displayed on a TFT screen, which is also interfaced to the Dev-kit.

Peripherals:

1. Keypad - Digilent PmodKYPD <https://store.digilentinc.com/pmod-kypd-16-button-keypad/>
2. Display - Adafruit E218213 <https://www.adafruit.com/product/1480>

Block Diagram of the system:



Goals and Deliverables:

The main objective of this project is to learn how to interface different peripherals to the Dev-kit. At the end of the project, we would want to be able to collect/parse the keys pressed on the keypad as input to our code. These inputs are then operated upon depending on the user's choice of operation. The outputs of said operation would be displayed on the TFT display.

Responsibilities:

Anna is responsible for programming the keypad, Bindu will take care of handling the software on 4088, and Vanessa is responsible for interfacing the display.