

Simple Calculator (LCD/Keypad)

Description

Build Simple Calculator with interface between Arduino and (LCD&Keypad) through 8255.

Your Calculator must Support:

- + - * /
- Multiple Numbers ex. 125-152
- Negative Output ex. 120 – 180
- Negative Operation ex. -120+20
- Undefined Operation ex. 0/40

Objectives

The following are the objectives of this project:

1. Learn how to use lcd as output device
2. Learn how to use Keypad as output device
3. Interfacing with LCD and Keypad

Hardware requirements

Arduino Kit, Ppi 8255, LCD , Keypad

Basic system design and operation

KeyPad Interface

- Pulls all four columns low
- Then Pulls the first row high.
- Then reads the input states of each column
- If reads pin 1 high. This means that a contact has been made between column 4 and row 1, so button 'A' has been pressed.

Lcd Interface

- To send a command to LCD, RS=0 & E = high to-low
- To send Data to LCD, RS=1 & E = high-to-low

