

Challenge #1

Analog - KeyPad Difference

Analog to Digital Converter and GPIO

Introduction

The challenge is to use the 18F4520 to read one analog input and a two-digit number from a keypad. The system will sample the A/D channel and represent the input as a percentage value; For example: Given a $V_{ref+}=5V$ and $V_{ref-}=0V$ a $V_{in}=2.5V$ shall be interpreted as 50, similarly a value of 5V shall be represented as 100.

The processor shall display in the first LCD row the difference between the A/D percentage representation and the KeyPad. You may use the second LCD row to show the A/D and KeyPad Values.

Due Date

This exercise is due 7 days from its release. Please submit a presentation page, the commented and properly indented source code plus the circuit schematic.