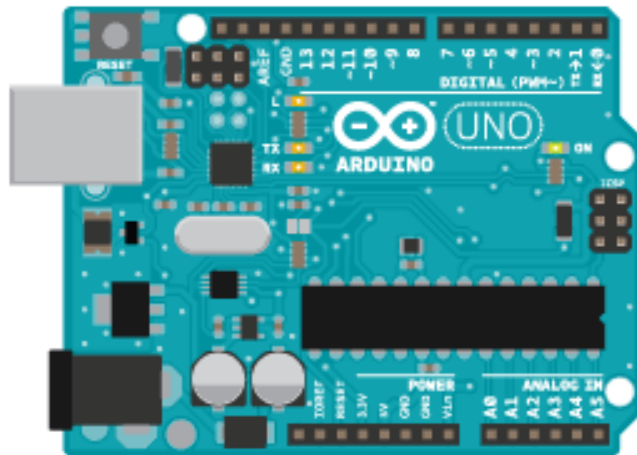
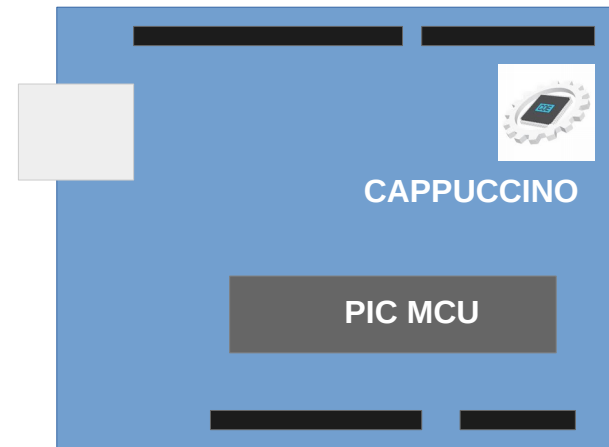


# Cappuccino: CoE version of Arduino

- Due to limitation of Arduino boards, we will design our own Arduino compatible board
- Utilize PIC microcontroller (16F873A)
- Compatible with available Shields



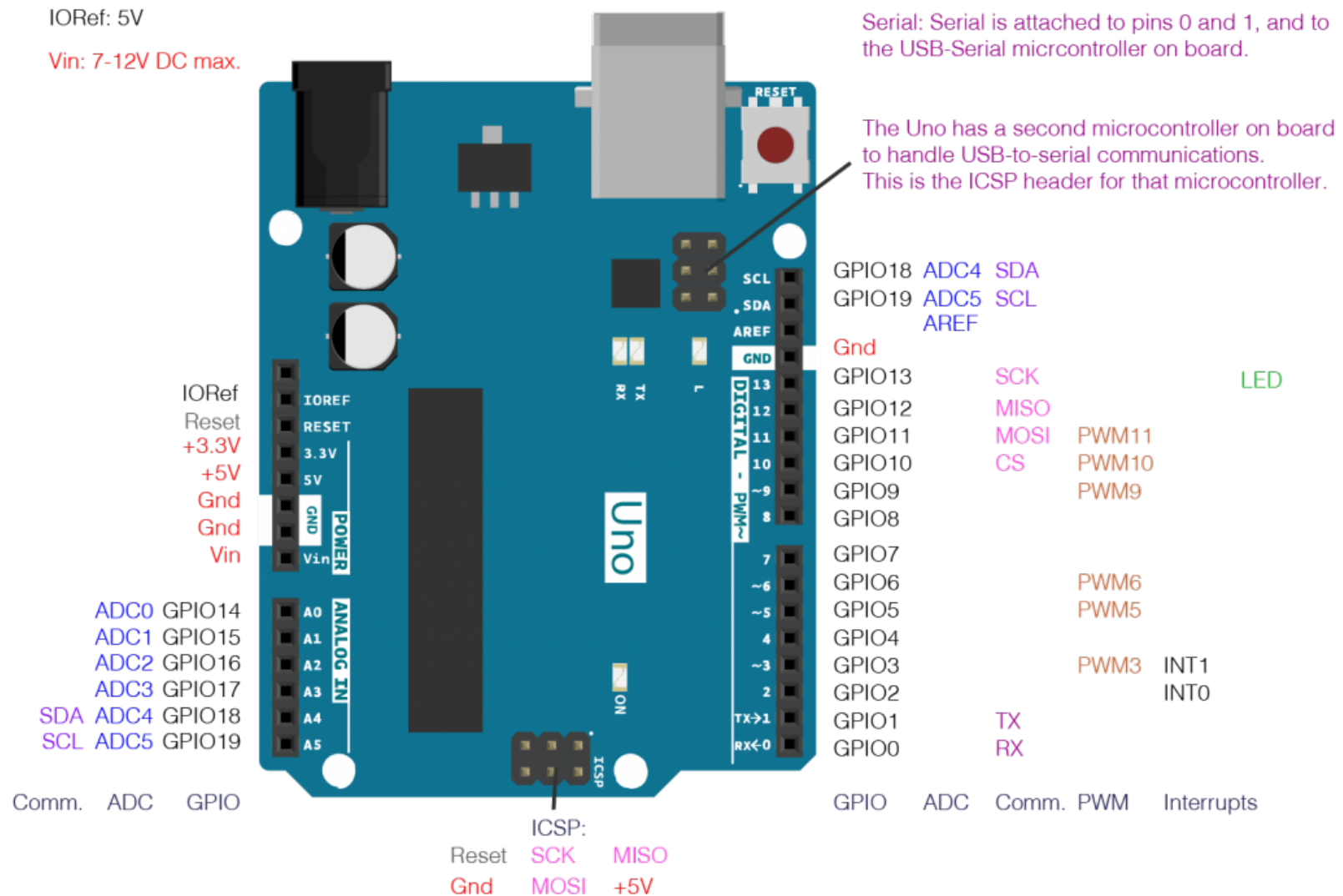
**Vs**



# Arduino Compatability

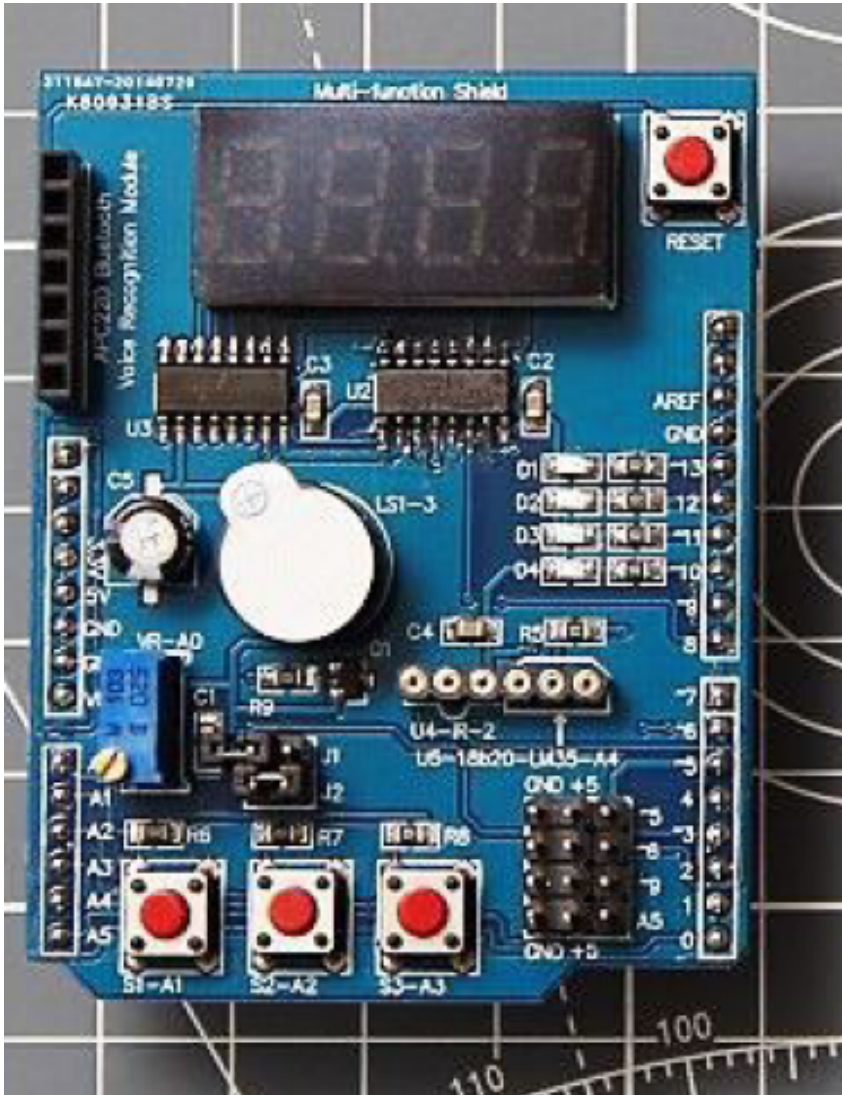
To do:

- Study Arduino shield connectors carefully
- Map PIC16F873A pins to Arduino shield connectors



# Implementation & Test

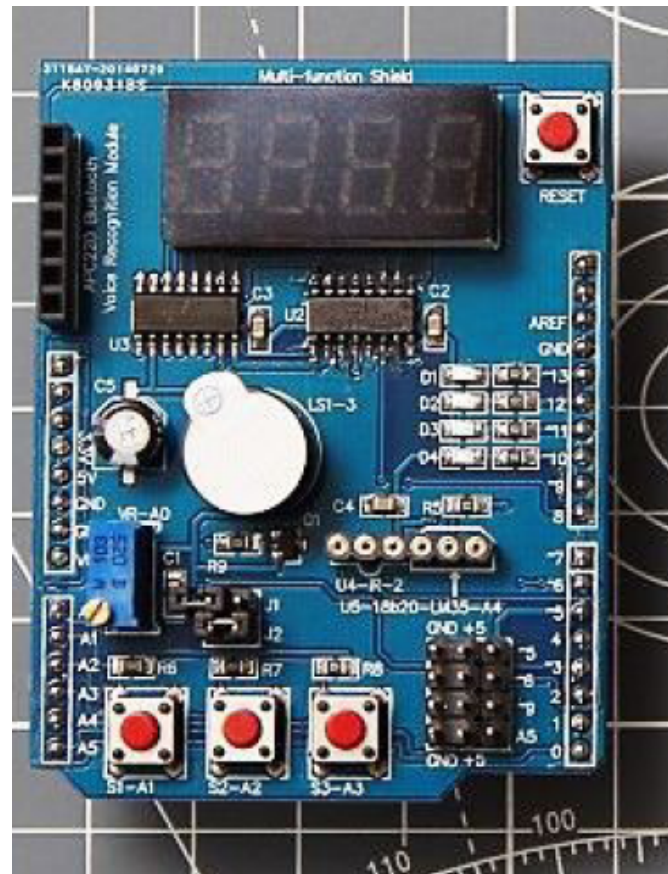
- Utilize Tiny Multi Bootloader
- Write assembly program using MPLABX
- Test with Arduino multifunction shield



- 4 digits 7-segment LEDs
- 4 LEDs
- 3 push-button switches
- Buzzer
- 1 Potentiometer
- Sensor connectors

# Experiment

- Design a digital thermostat
- Use LM35 analog temperature sensor
- Display current temperature on 7-segment LEDs
- Set warning temperature +/-
- Alarm when temperature exceed present temperature



# Test circuit

