Experiment 012 Motor control

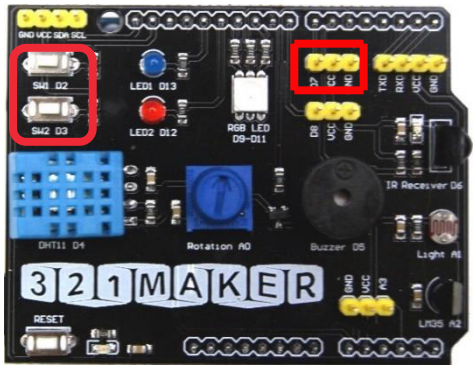
#WeAreAllMakers

OVERVIEW

In this experiment you will use the push buttons to provide input and control programs.

OUTCOMES

By the end of this experiment you will be able to:



REQUIREMENTS

- Arduino-Compatible board
- 321Maker Things Shield
- USB Cable
- Arduino Software

PREREQUISITES

- Getting Started Tutorial: http://321maker.com/start
- Source Code:

VIDEO TUTORIAL

http://youtube.com/indevelopment

BACKGROUND

Push Button

The temperature sensor changes its output voltage linearly based on the ambient temperature around the sensor. The push buttons are connected to digital pins D2 and D3 on the Arduino.

LEVEL 1 PROCEDURE

- [ ] Download the sample code from File/ Examples/ Servo/ Knob
- [ ] Modify the file to work with your arduino (pin 7)
- [ ] Plug servo into ORANGE--> pin 7 RED --> VCC BLACK --> GND
- [ ]
- [ ]
- [ ]

LEVEL 2 PROGRAM MODIFICATION

- [ ] Include the two buttons so that when you press button 1(d2) the motor moves forwards by 25% and when you hit button 2(d3) the motor move back 25%.

LEVEL 3 ADVANCED APPLICATION

- [ ] When the user hits button 1 to motor moves forwards 25% and at each positions a different light comes on (ex: 0% --> red led 25%--> blue led 50%--> Green RGB ect)

  If the motor gets to 100% and the user hits button 1 the motor should return to 0% by going through all the lights in reverse order.

  Create a similar code for when the user hits button 2 the motor goes down by 25% and if the user is at 0% and button 2 is pressed it goes to 100% and goes through all the lights.