ARDUINO SENSOR TESTER

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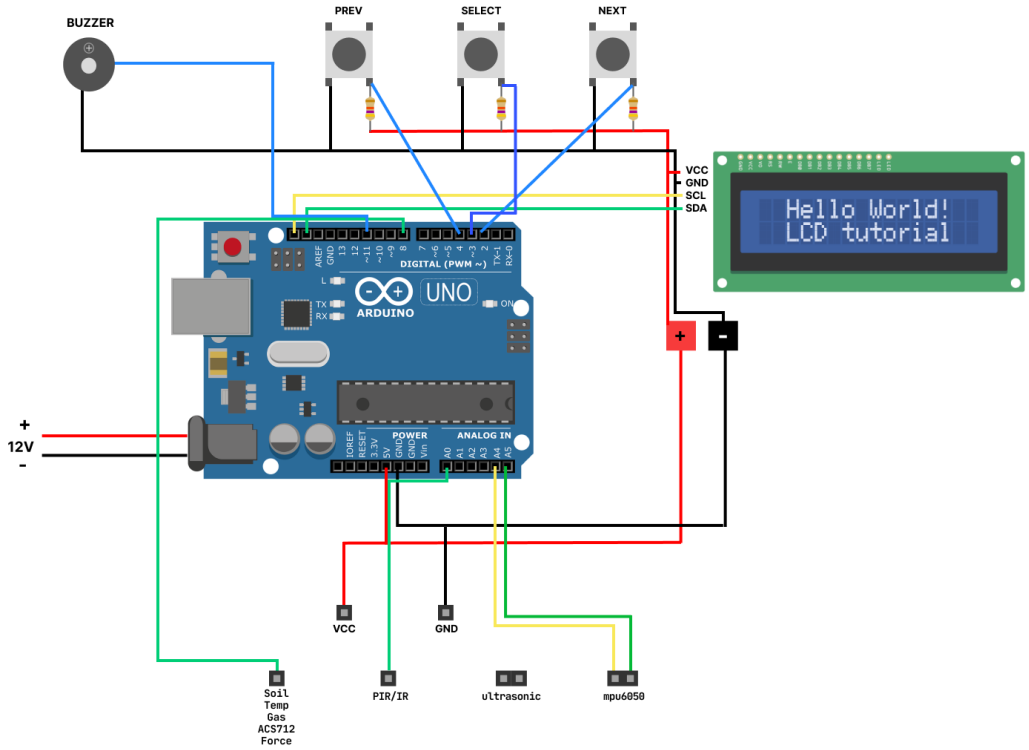
Problem Statement:
As ECE Labs at IIITD nurture students working on various Arduino based projects involving a vast range of sensors, as a result, some sensors might get damaged. This leads to a problem for the Lab Assistants to segregate the sensors which have been damaged and are no longer working as expected. This process of setting up each sensor with an arduino and testing it is tedious and eats a lot of their precious time. As a result, they were searching for a plug-and-play sensor testing kit to save time.

Our Solution:
The device correctly solves the problem of the sensor testing process being time consuming. It is a plug and play solution where the user can connect the sensor with some jumper wires, and the device will inform the user about the working state of the sensor. Internally, the device runs a code to test that particular sensor.

About the device :
This device can to used to measure whether the following sensors are working correctly. The sensors include:
Bluetooth HC05
Current ACS712
DHT11 Temp and Humidity
Force FSR402
Gas MQ135
IR
Gyro & Accelerometer MPU6050
PIR
Soil Moisture
Ultrasonic

Schematic:



Getting Started:

1) Power the device with a 9-12V DC Adapter and turn the power switch on to see the Green Power LED glowing.
2) The LCD display will display a Welcome message, followed by the list of sensors which can be tested using this device.
3) The user should then connect the test sensor in the respective ports using jumper cables and then use the 2 navigation switches to choose the sensor which they want to test.
4) As the user selects the sensor from the list using the SELECT switch, the device will run tests to check whether the sensor is working properly.
5) The display will show up with a message informing the user about the working state of the test sensor.

Support:

For any further queries, please contact Mr. Dhruv Chhabra.