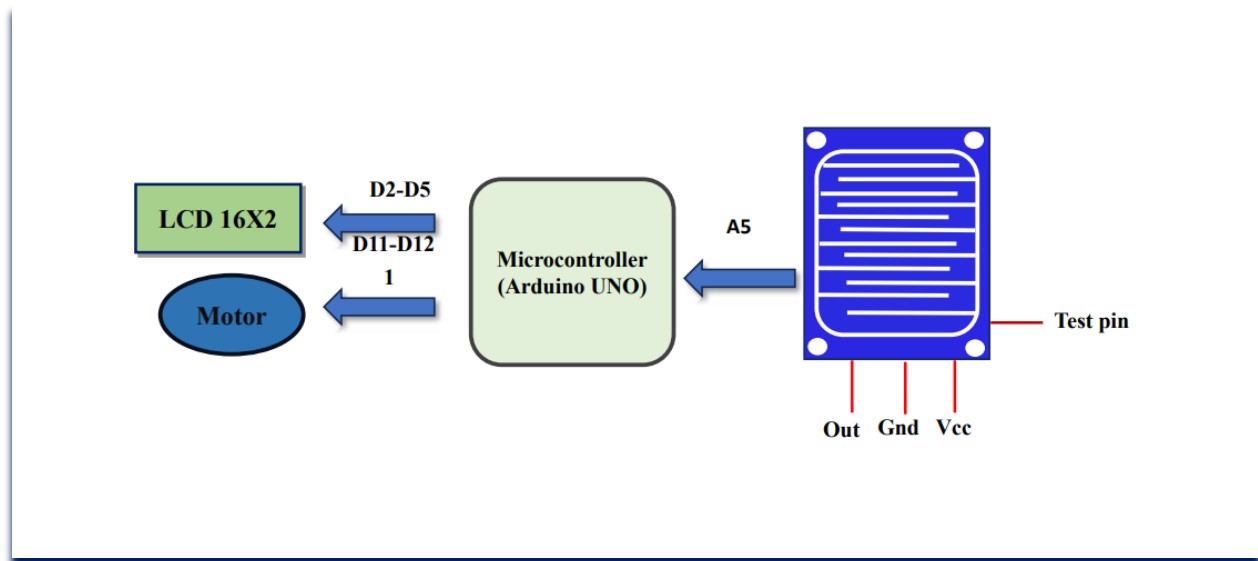


Rain Sensing Motor Control using Arduino UNO

Description:

In this project we have used her the rain sensor motor to detect the water and activate a DC motor. The Arduino Uno board that receives the signal from the rain sensor motor will be turned ON and OFF accordingly. The LCD display shows the status of the motor as either “ON” or “OFF” in real-time. The logic status used is that the motor is ON when it detects the rain and OFF when it’s no rain.

Block diagram:



INPUT And OUTPUT Table:

S. No	Description	Name		Type	Date Direction	Spectification	Remarks
1	Rain Sensor OUT	A5		INP	D1	Digital	Active High
2	Rain Sensor VCC	VCC		OUT	DO	Digital	Active High
3	Rain Sensor GND	GND		OUT	DO	Digital	Active High
4	LCD RST	RS		OUT	DO	Digital	Active High
5	LCD EN	EN		OUT	DO	Digital	Active High
6	LCD DATA PIN	D4		OUT	DO	Digital	Active High

7	LCD DATA PIN	D5		OUT	DO	Digital	Active High
8	LCD DATA PIN	D6		OUT	DO	Digital	Active High
9	LCD DATA PIN	D7		OUT	DO	Digital	Active High
10	MOTOR	PD1		OUT	DO	Digital	Active High

Source Code:

```
#include <LiquidCrystal.h>

const int rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2;
LiquidCrystal lcd (rs, en, d4, d5, d6, d7) ;// LCD pins: RS, E, D4, D5, D6, D7
int rainSensorPin = A5;
int motor Pin = 1;
int motor Status = LOW;

void setup () {
  lcd. begin (16, 2); // Initialize the LCD
  pin Mode (rainSensorPin, INPUT);
  pin Mode (motor Pin, OUTPUT);
}

void loop () {
  int rainStatus = digitalRead(rainSensorPin);

  if (rainStatus == HIGH) {
    motor Status = HIGH;
    digital Write (motor Pin, motor Status);
    lcd. Clear ();
    lcd. Print("motor=on");
    lcd. set Cursor (0,1);
    lcd. Print("rain");

  } else {
    motor Status = LOW;
    digital Write (motor Pin, motor Status);
    lcd. Clear ();
    lcd. Print("motor=off");
    lcd. set Cursor (0,1);
    lcd. Print ("No rain");
  }

  delay (1000); // Delay for stability
}
```

Schematic:

