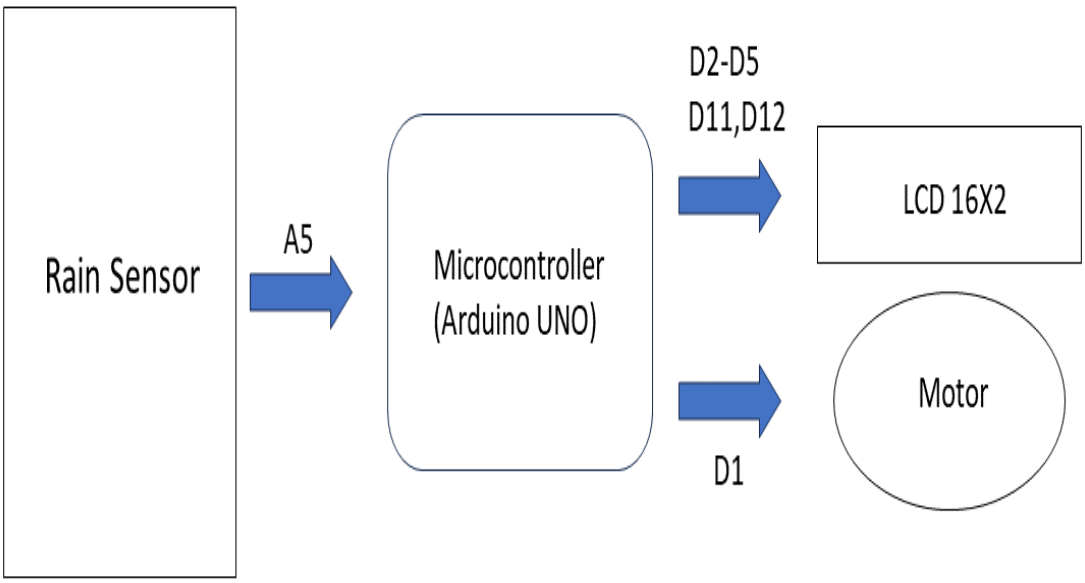
PROJECT 4
RAIN SENSING MOTOR

➢ INTRODUCTION:

Rain sensing motor control is a technology used in automobiles to automatically control windshield wipers in response to varying levels of rainfall or moisture on the windshield. This system enhances driving safety and convenience by ensuring that the windshield remains clear of water, allowing the driver to maintain optimal visibility in rainy conditions without the need for manual wiper adjustments.

➢ BLOCK DIAGRAM:



➢ MATERIALS REQUIRED:

1. Arduino uno
2. LCD 16x2
3. Rain sensor
4. Motor
5. Connecting wires
6. Ground
7. Voltage supply

➢ PROGRAM:

```
#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 motorPin = 1;
int motorStatus = LOW;

void setup() {
  lcd.begin(16, 2); // Initialize the LCD
  pinMode(rainSensorPin, INPUT);
  pinMode(motorPin, OUTPUT);
}

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

```
  if (rainStatus == HIGH) {
    motorStatus = HIGH;
    digitalWrite(motorPin, motorStatus);
    lcd.clear();
    lcd.print("Motor=on");
    lcd.setCursor(0,1);
    lcd.print("Rain");


  } else {
    motorStatus = LOW;
    digitalWrite(motorPin, motorStatus);
    lcd.clear();
    lcd.print("Motor=off");
    lcd.setCursor(0,1);
     lcd.print("No rain");

  }

  delay(500); // Delay for stability
}
```

➢ SCHEMATIC DIAGRAM: