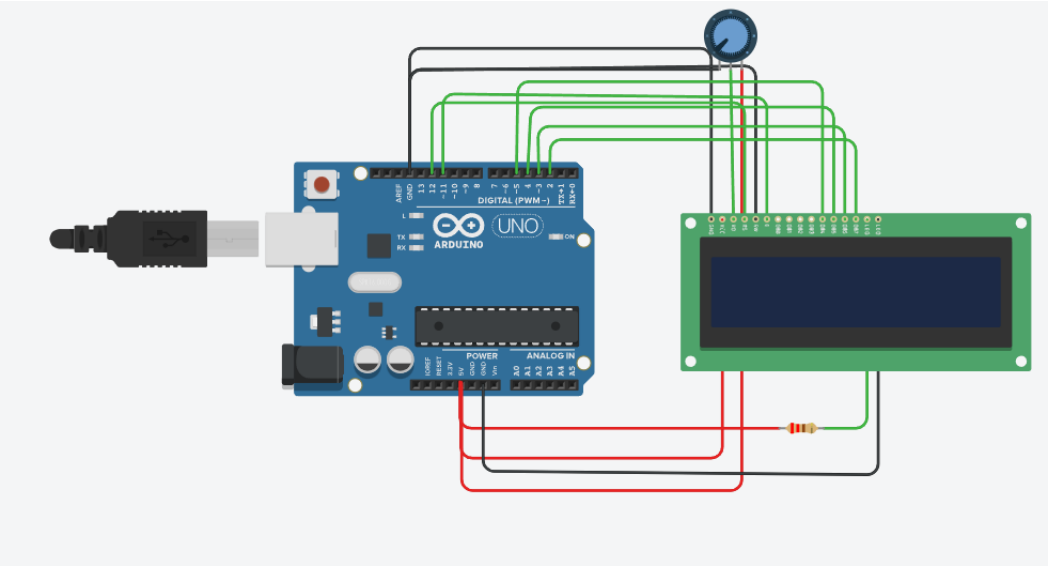
Interfacing LCD 16x2 with Arduino UNO R3

Circuit Diagram :

LCD Pin	Connect to Arduino
RS	Pin 12
E	Pin 11
D4	Pin 5
D5	Pin 4
D6	Pin 3
D7	Pin 2
RW	GND
VSS	GND
VDD	5V
VO	Middle of 10k Pot
A	5V (via 220Ω)
K	GND
DB0–DB3	Not connected



Code for Manual Scrolling :

```
#include <LiquidCrystal.h>

// Initialize the LCD (RS, E, D4, D5, D6, D7)
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

String message = "Ee Saala Cup Namdu   "; // Spaces added at end for smooth scrolling
int displayLength = 16;  // LCD width in characters

void setup() {
  lcd.begin(16, 2);  // 16 columns, 2 rows
}

void loop() {
  for (int i = 0; i <= message.length() - 1; i++) {
    lcd.clear();
    lcd.setCursor(0, 0);
    lcd.print(message.substring(i, i + displayLength));
    delay(300);

    // Wrap around when end of string is reached
    if (i + displayLength >= message.length()) {
      for (int j = 1; j < displayLength; j++) {
        lcd.clear();
        lcd.setCursor(0, 0);
        lcd.print(message.substring(message.length() - j) + message.substring(0, displayLength - j));
```

```
      delay(300);
    }
    i = -1; // Reset to -1 because loop will increment it to 0
   }
  }
}
```

Code for Auto scrolling using a default function :

```
#include <LiquidCrystal.h>

// LCD pin mapping: RS, E, D4, D5, D6, D7
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

String message = "Ee Saala Cup Namdu   "; // Extra spaces for smooth scroll

void setup() {
  lcd.begin(16, 2);        // Initialize 16x2 LCD
  lcd.print(message);      // Print initial part
}

void loop() {
  lcd.scrollDisplayLeft();  // Scroll one position to the left (or) scrollDisplayRight() if needed
  delay(300);              // Delay between scrolls
}
```