

## Circuit Connections

Follow these steps to connect the **keypad** and **LCD** to the **Arduino**:

### 1. Keypad Connections:

- The **4 row pins** (R1, R2, R3, R4) and **4 column pins** (C1, C2, C3, C4) of the **4×4 keypad** are connected to **PWM pins 0-7** on the **Arduino**, respectively.

### 2. LCD Connections:

- **Data Pins:** The LCD's **DB4 to DB7** pins are connected to **Arduino digital pins 8 to 11**.
- **Control Pins:**
  - The **Enable (E)** pin of the LCD is connected to **digital pin 12** of the Arduino.
  - The **Register Select (RS)** pin of the LCD is connected to **digital pin 13** of the Arduino.
- **Backlight & Contrast:**
  - **LED1** (backlight) is connected to **GND** via a **1kΩ resistor**.
  - **Vo** (contrast) and **GND** of the LCD are both connected to **GND** of the Arduino.
  - The **Vo** and **RW** pins of the LCD are **shorted (grounded)** to set it in **write mode**.

- The **VCC pin** and the second **LED pin** of the LCD are shorted and connected to the **5V pin** of the Arduino to power the display