

## Components Used in the Project

**Arduino Uno:** A microcontroller board that controls the keypad, LCD display, and performs calculations.

**4x4 Keypad:** A matrix keypad used to input numbers and mathematical operations.

**LCD Display (16x2):** A screen that shows the entered numbers, operations, and results.

**Resistors (1k $\Omega$ ):** Used to control the current flow to the LEDs and LCD.

**Breadboard:** Used to connect the components in the circuit.

**Connecting Wires:** For establishing connections between the Arduino, keypad, and LCD display.

## Project Description

This DIY calculator project is built using an Arduino Uno, a 4x4 keypad, and a 16x2 LCD display. The keypad is used to input digits and select arithmetic operations (addition, subtraction, multiplication, and

division). The LCD display shows the entered numbers, chosen operation, and the result. The code uses the Keypad.h and LiquidCrystal.h libraries to manage keypad inputs and display outputs. The calculator can also

clear the display with a dedicated 'C' button. An equal button ('#') is used to complete the calculation and display the result. The system efficiently handles integer and decimal values, with additional error

handling to manage division by zero conditions.