7 SEGMENT DISPLAY

AIM : To perform 7 segment display on the breadboard.

COMPONENTS :

Name	Quantity	Component
U1	1	Arduino Uno R3
Digit1	1	Anode 7 Segment Display
R1 R2 R3 R4 R5 R6 R7	7	1 kΩ Resistor

PROCEDURE :

Step 1: Identify the Pin Configuration.

- **Pin Identification:** Look at the datasheet for your specific 7-segment display to identify the pins. A typical 7-segment display has 10 pins. The segments (a to g and sometimes a dot) are labelled , and there is a common pin (either cathode or anode).

Step 2: Place the Display on the Breadboard

- Insert the 7-segment display into the breadboard, ensuring each pin has its own row for easy connection.

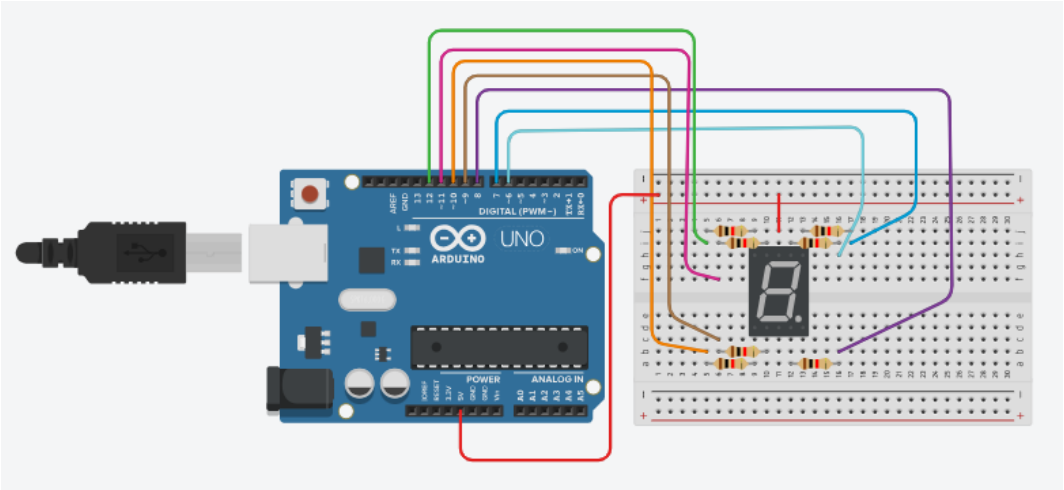
Step 3: Connect the Common Pin

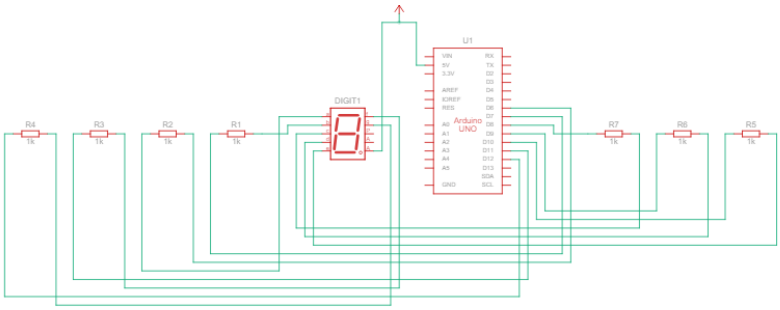
- **Common Cathode Display:**
  - Connect the common cathode pin(s) to the ground (GND) rail on the breadboard.
- **Common Anode Display:**
  - Connect the common anode pin(s) to the 5V rail on the breadboard

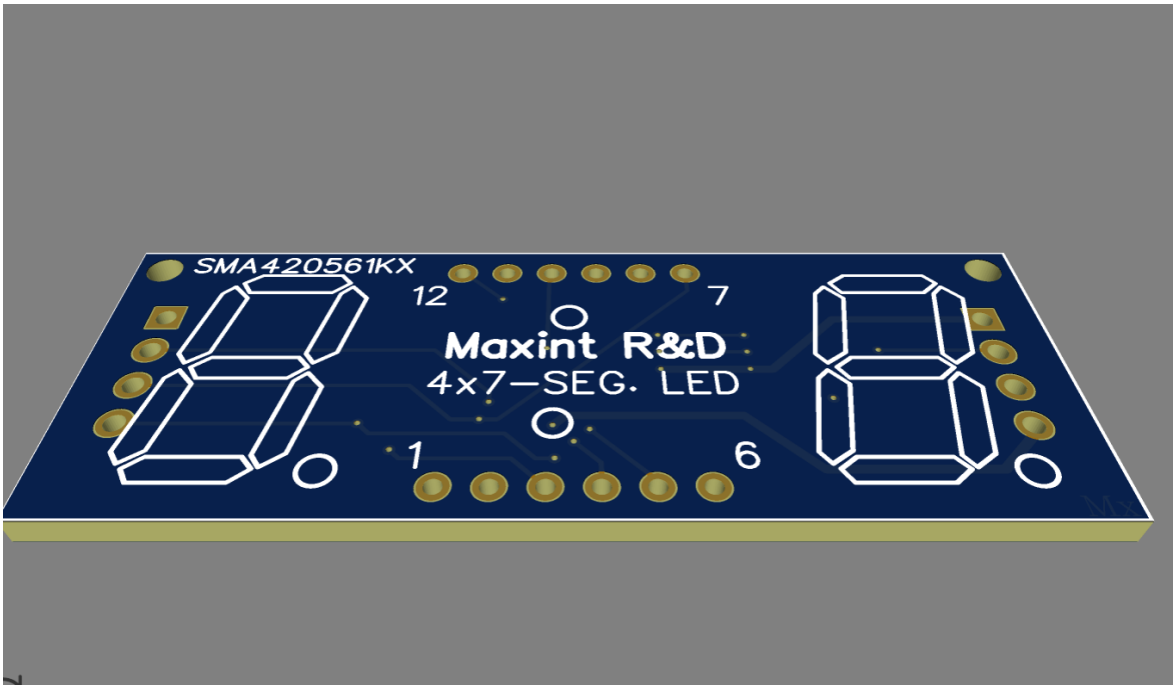
Step 4: Connect Resistors

1. Place a resistor (220Ω to 1kΩ) between each segment pin (a to g) and the corresponding Arduino digital I/O pin. This limits the current through each segment to prevent damage.

SCHEMATIC CIRCUIT DIAGRAM :







RESULT : Setting up and programming a 7-segment display with an Arduino is a straightforward and rewarding project that enhances your understanding of both hardware and software integration. By following the procedure, you learned how to identify and connect the pins of a 7-segment display, utilize current-limiting resistors to protect the LEDs, and write an Arduino program to control the display.

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