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**Abstract**

A seven-segment display, or seven-segment indicator, is a form of electronic display device for displaying decimal alphabets-numerals that is an alternative to the more complex dot-matrix displays. Normally seven segment display letter from a-g then numbers from 0-9 quite unlike nine-segment, fourteen-segment and sixteen-segment. Due to these limitations, most display projects go for dot matrix display even with the advantages of sharp display and availability of seven segments. This paper presents various ways of combining two seven segment display to achieve other letters from h-z using piece-wise continuous algorithm via an assembly coded microcontroller

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**1.Title**

Interface seven segment display with Arduino uno to generate 2- digit up counter

**2.Problem Definition**

Interface seven segment display with Arduino uno to generate 2- digit up counter

**3. Components used**

Arduino Uno – 1

Programmer Cable – 1

Seven-Segment Display - 2

Male-Male Jumper Wires

**4. Design/Functional Block Diagram**

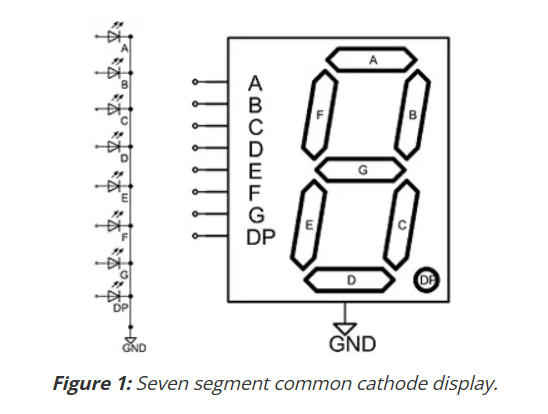
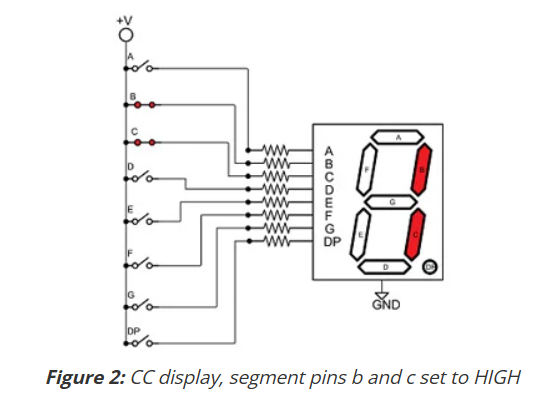
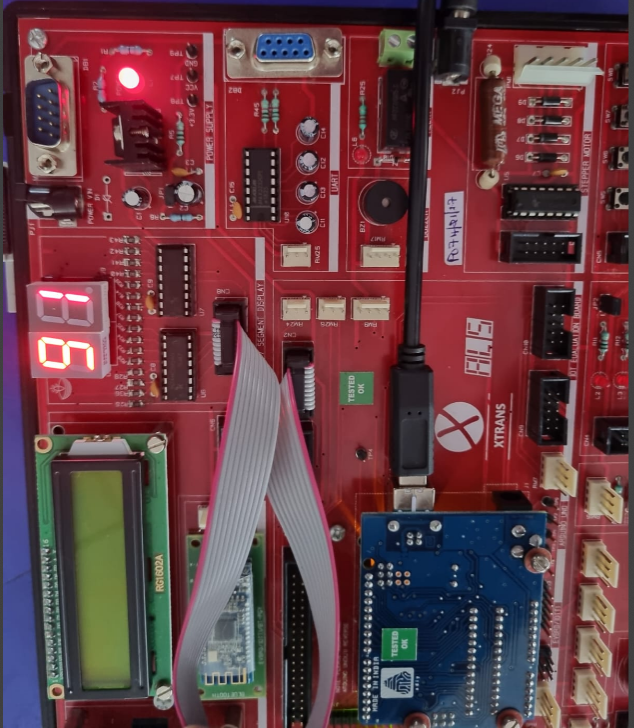
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Fig 1.  Seven segment common cathode display.

****

**Fig 2.** CC display, segment pins b and c set to HIGH

**5. Working Model of the final solution**

****

**Fig 2.**Arduino with seven segment display output

**6. Working code for mini project**

#include <ShiftRegister74HC595.h>

// CREATE SHIFT REGISTER OBJECT (NUMBER OF SHIFT REGISTERS, DATA PIN, CLOCK PIN, LATCH PIN)

// CONNECT CN2 to CN8

//ShiftRegister74HC595 sr (2, 12,10,11);

ShiftRegister74HC595 sr (2, 4,2,3);

uint8\_t numberB[] = {B00111111, //0

B00000110, //1

B01011011, //2

B01001111, //3

B01100110, //4

B01101101, //5

B01111101, //6

B00000111, //7

B01111111, //8

B01101111 //9

};

void setup()

{

}

void loop()

{

for(int i=0;i<10;i++)

{

for (int j = 0; j < 10; j++)

{

uint8\_t pinValues[] = {numberB[i],numberB[j]};

sr.setAll(pinValues);

delay(2000);

}

}

}

**7.Conclusion**

**8.References**

[1] Muhammad Ali Mazidi, Jainice Gillispie Mazidi and Rolin D. McKinlay; The 8051 Microcontrollers and Embedded Systems using Assembly and C, Second Edition, Eastern Economy Edition-2006, Prentice Hall of India Private Limited, New Delhi-110001.

[2]ALS-SDA-8051-MEL User’s Manual, Advanced Electronics, Banagalore-560058, Karnataka, India.