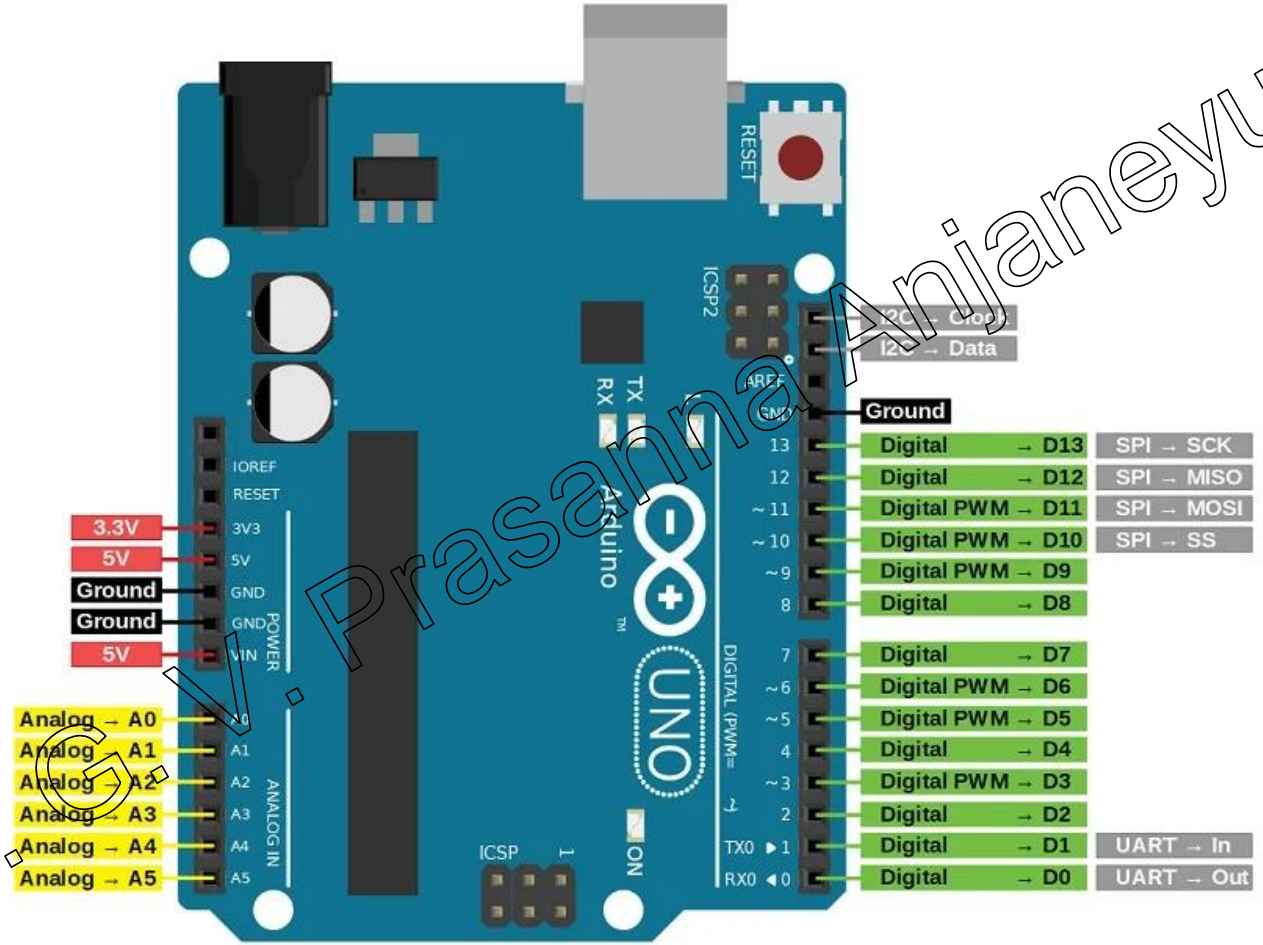
6.Seven Segment Display

using ARDUINO

Dr. G. V. Prasanna Anjaneyulu



Seven_Segment_Display by Dr.GVP

Apparatus

1.PC with Arduino IDE

2.Arduino UNO Board

3.USB cable

4.Seven Segment Display [SSD]

5.Bread board

6.1kΩ resistor

7.Jumper wires

Learning Objectives

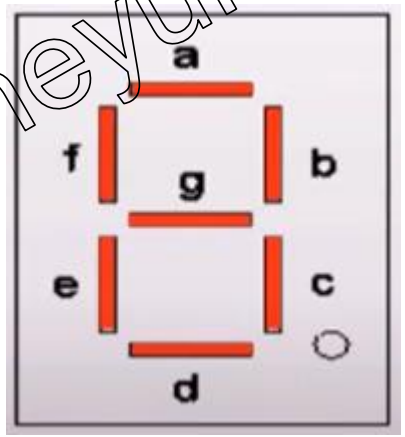
We will learn how to

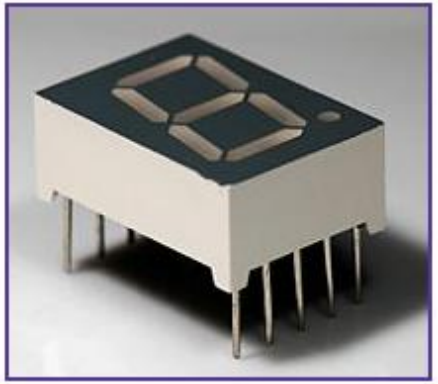
- **Connect a Seven Segment Display to Arduino board**
- **Write a program to display digits from 0 to 4 on Seven Segment Display**

Seven Segment Display

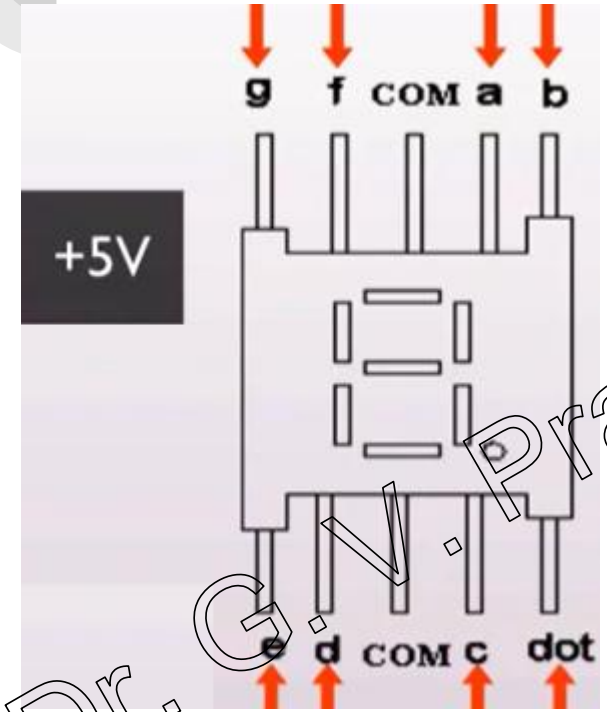
- The Seven Segment Display has seven LEDs arranged in the shape of digit eight

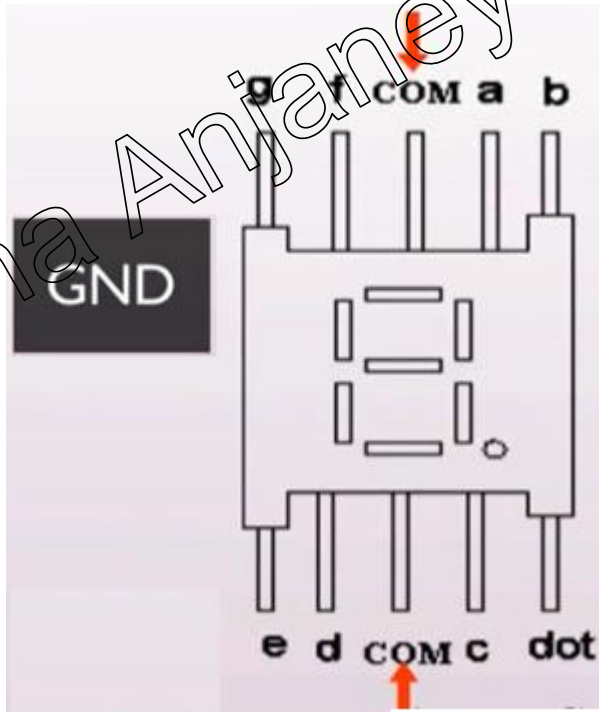
- There are two types of displays:
  - Common Anode
  - Common Cathode Seven Segment Display



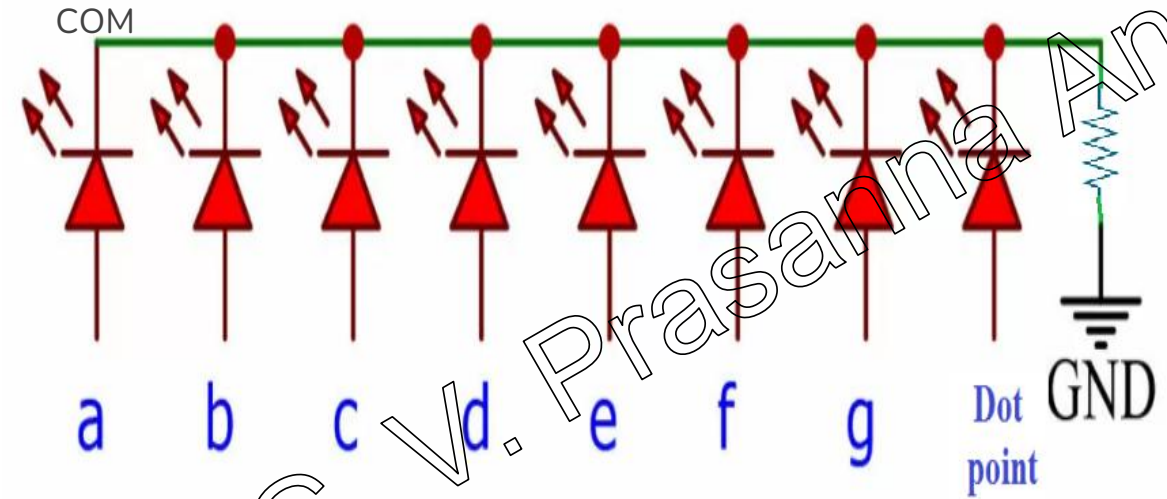


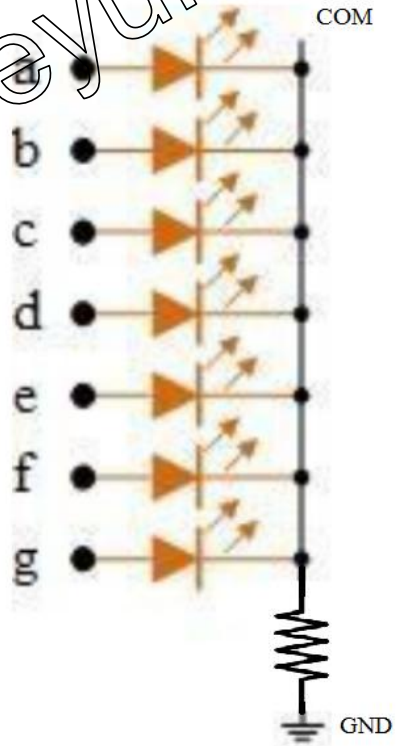
Common-Cathode [CC]



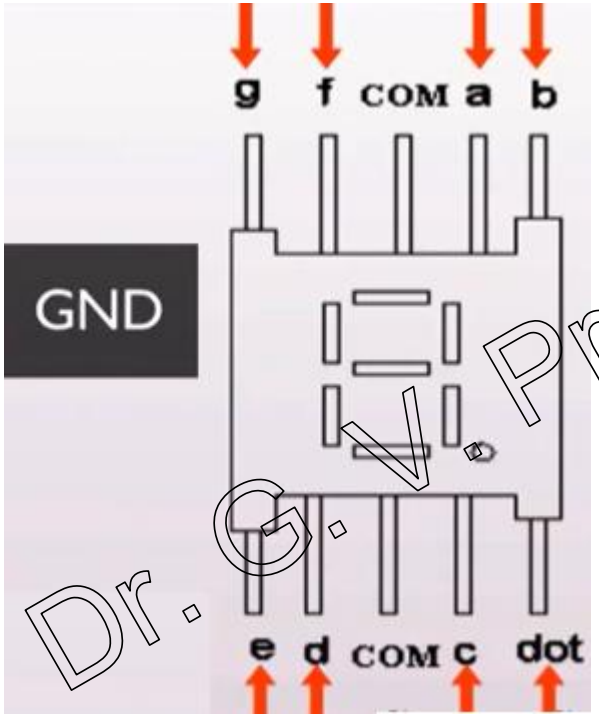


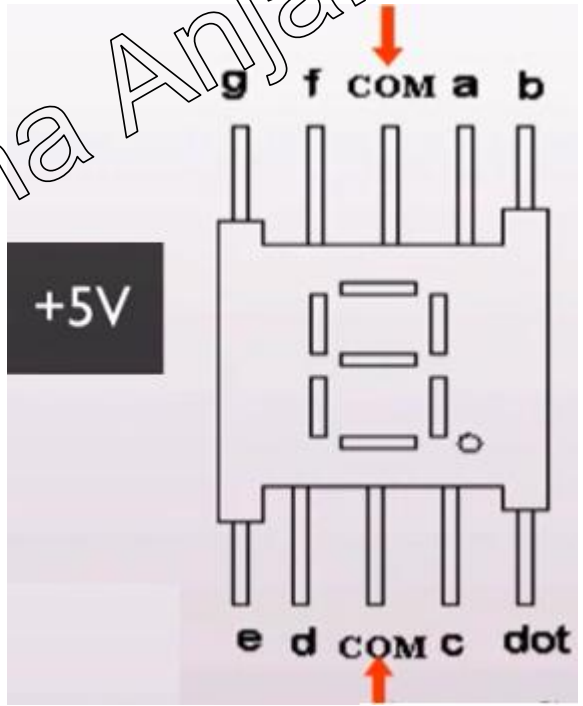
Contd….



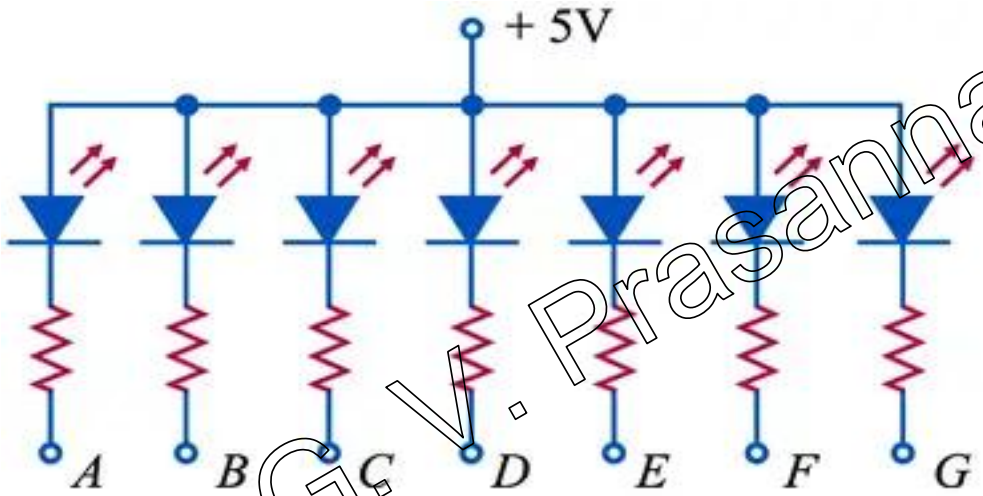


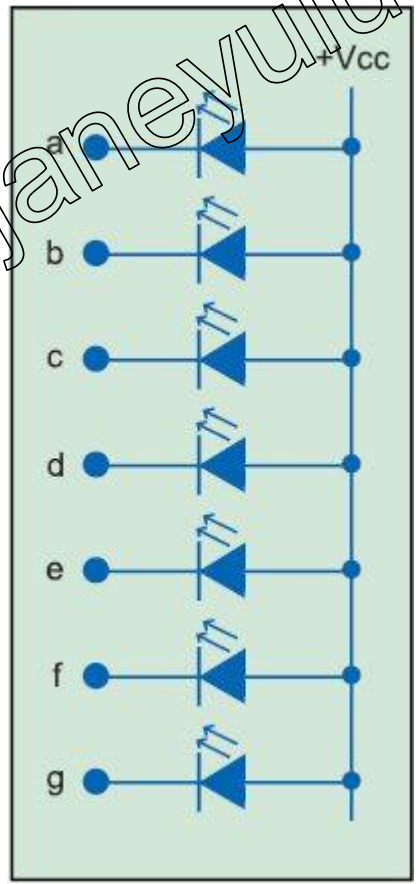
Common-Anode [CA]



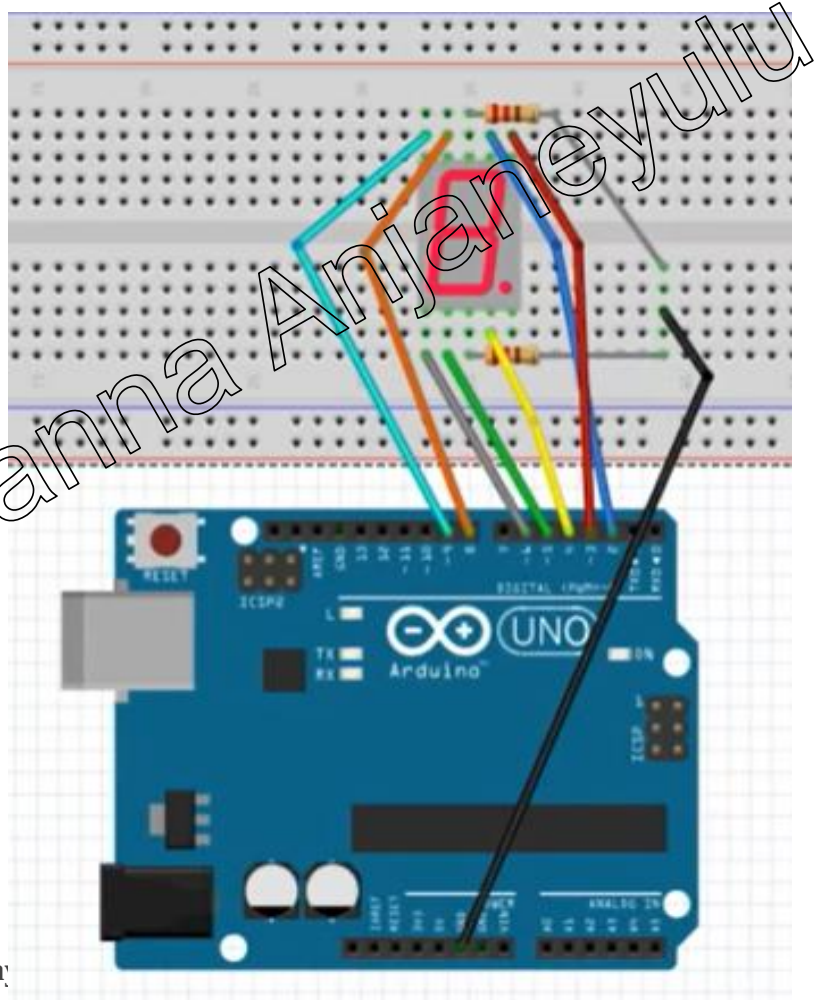


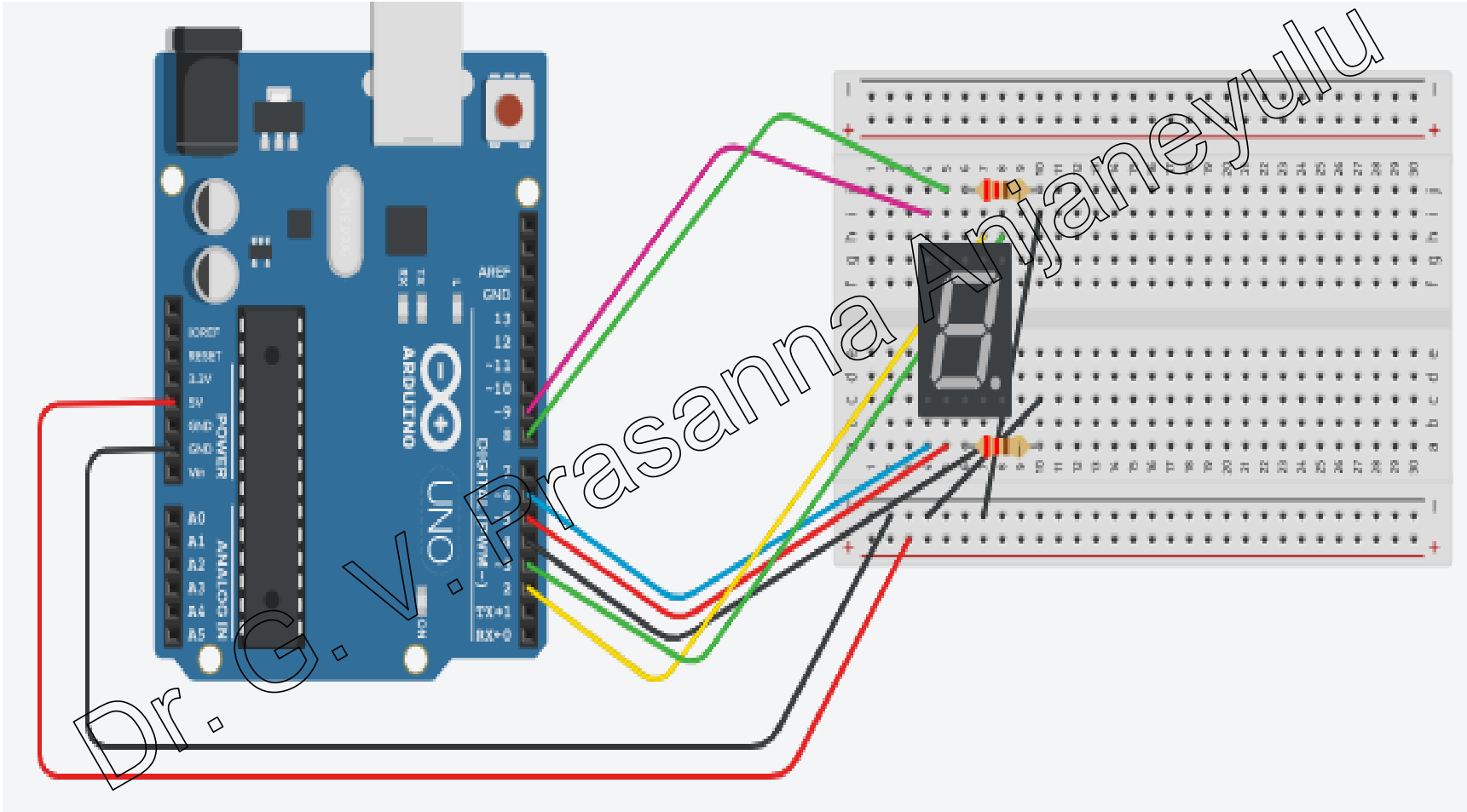
Contd….





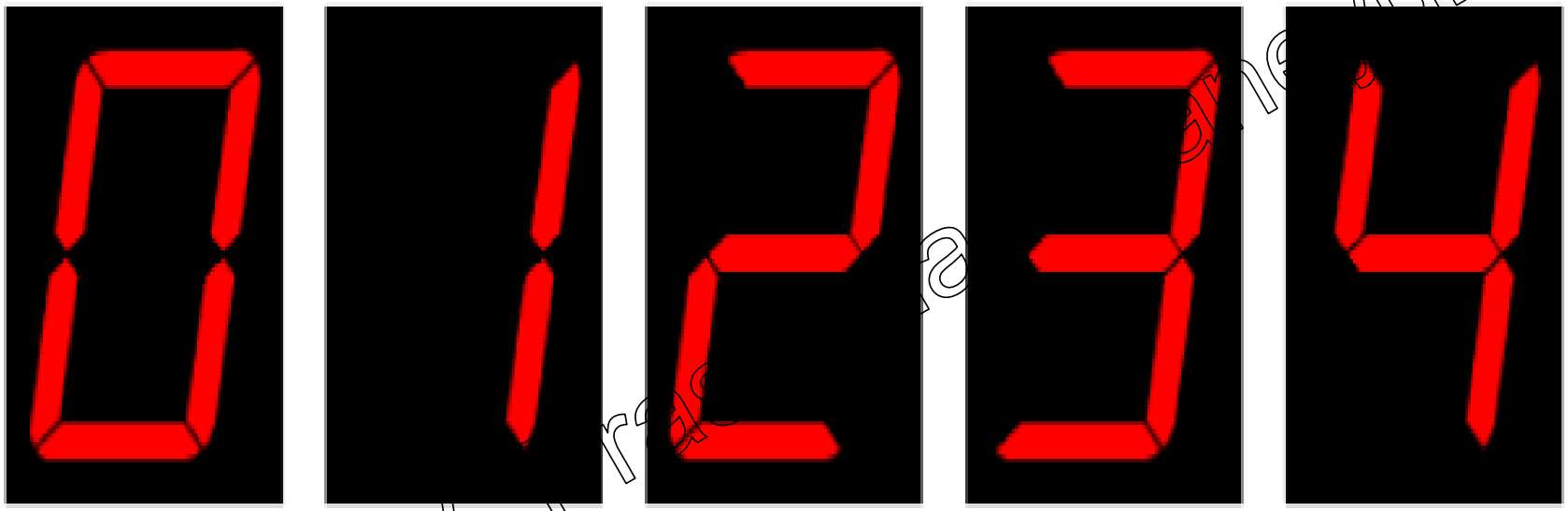
Implementation [CC]





Seven_Segment_Display by Dr.GVP

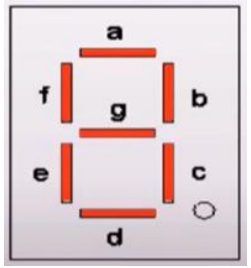
Numbers

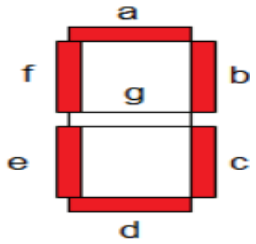


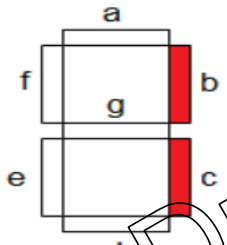
Program

```
#define a 2             //connecting segment a to
PIN2
#define b 3             //connecting segment b to
PIN3
#define c 4             //connecting segment c to
PIN4
#define d 5             //connecting segment d to
PIN5
#define e 6             //connecting segment e to
PIN6
#define f 8             //connecting segment f to
PIN8
#define g 9             //connecting segment g to
PIN9
void setup()
{
 pinMode(a, OUTPUT);
 pinMode(b, OUTPUT);
 pinMode(c, OUTPUT);
 pinMode(d, OUTPUT);
 pinMode(e, OUTPUT);
```

Contd….



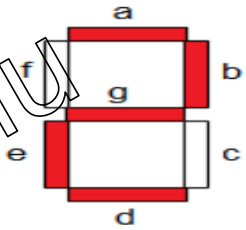


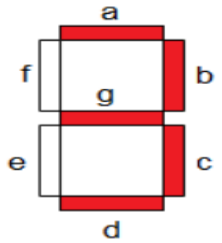


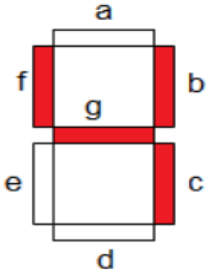

```
void loop()
{
//ZERO
digitalWrite(a,HIGH);
digitalWrite(b,HIGH);
digitalWrite(c,HIGH);
digitalWrite(d,HIGH);
digitalWrite(e,HIGH);
digitalWrite(f,HIGH);
digitalWrite(g,LOW);
delay(1000);
//ONE
digitalWrite(a,LOW);
digitalWrite(b,HIGH);
digitalWrite(c,HIGH);
digitalWrite(d,LOW);
digitalWrite(e,LOW);
digitalWrite(f,LOW);
digitalWrite(g,LOW);
delay(1000);
```

```
//TWO
digitalWrite(a,HIGH);
digitalWrite(b,HIGH);
digitalWrite(c,LOW);
digitalWrite(d,HIGH);
digitalWrite(e,HIGH);
digitalWrite(f,LOW);
digitalWrite(g,HIGH);
delay(1000);
//THREE
digitalWrite(a,HIGH);
digitalWrite(b,HIGH);
digitalWrite(c,HIGH);
digitalWrite(d,HIGH);
digitalWrite(e,LOW);
digitalWrite(f,LOW);
digitalWrite(g,HIGH);
delay(1000);
```

```
//FOUR
digitalWrite(a,LOW);
digitalWrite(b,HIGH);
digitalWrite(c,HIGH);
digitalWrite(d,LOW);
digitalWrite(e,LOW);
digitalWrite(f,HIGH);
digitalWrite(g,HIGH);
delay(1000);
}
```

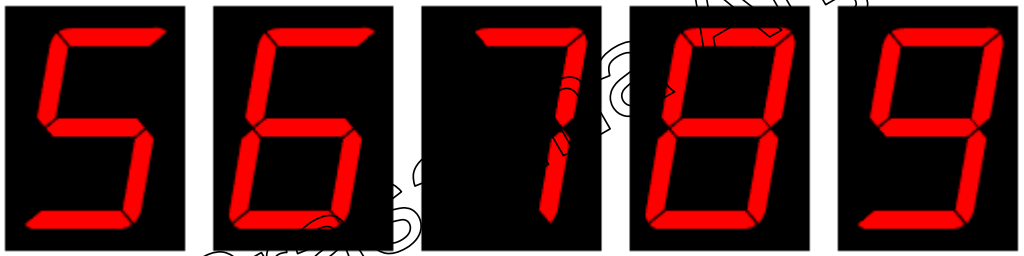




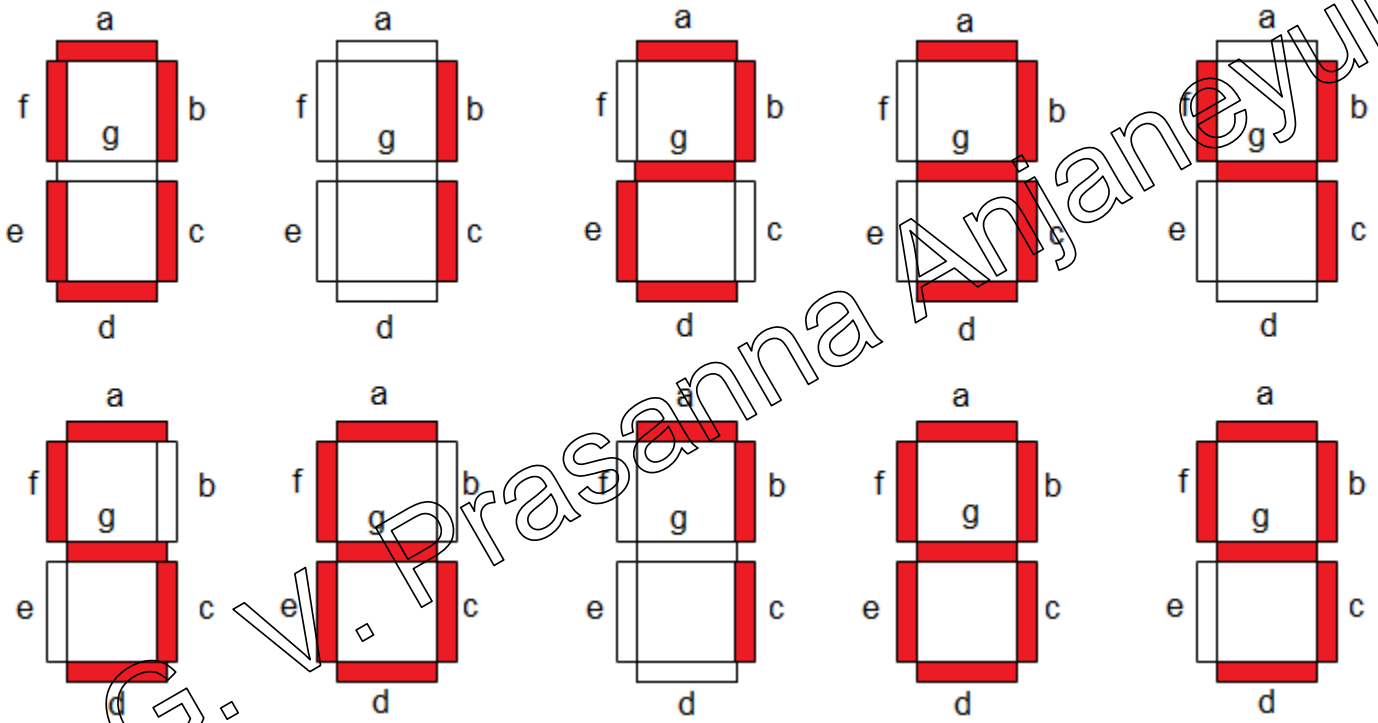


Assignment

- Change the same program to display the digits 5,6,7,8 and 9



- Change the same program to display the digits A to F



Seven_Segment_Display by Dr.GVP


Thank You...