

Laborator de Electronica Digitala (ED)

DISPLAY BCD 7-SEGMENTE

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LABORATOR 2 - CERINTE

- La apasarea butonului PD7, LED-ul PA5 sa clipeasca de 10 ori.
 - La apasarea butonului PD5, sa se incrementeze un contor si sa se afiseze valoarea lui in binar pe ledurile PB0-PB7.
-

BCD 7 SEGMENTE

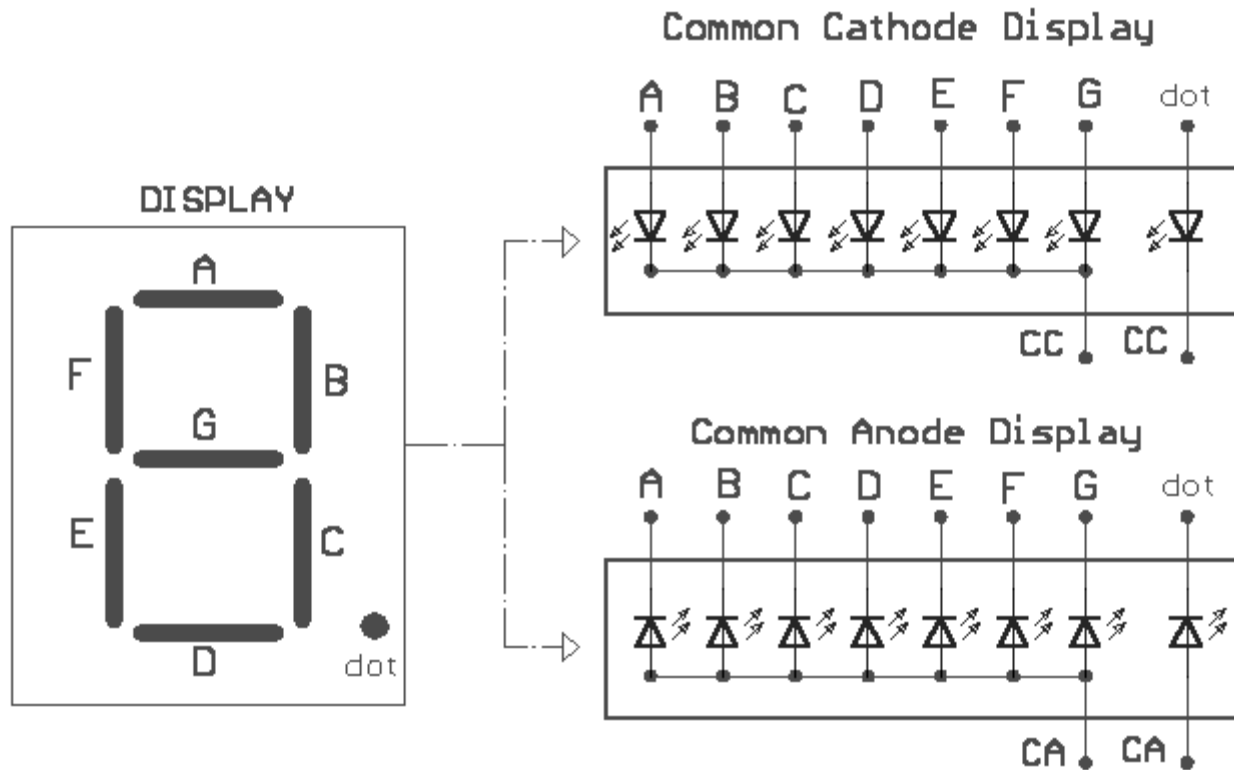
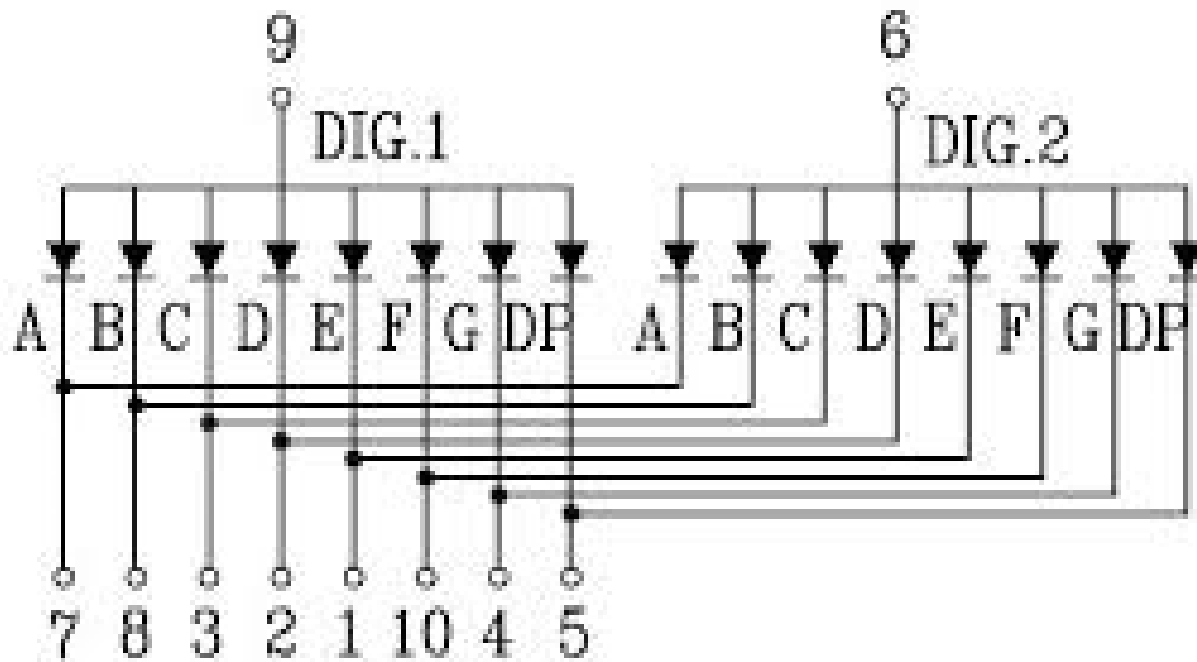


Fig.7-- Common Anode/Cathode DISPLAY

Sam 6/02

BCD 7 SEGMENTE



BCD 7 SEGMENTE

```
DDRA |= 0b00001111;
```

```
// set bit as output
```

```
DDRC |= 0b11111111;
```

```
// set bit as output
```

```
// loop
```

```
for(;;){
```

```
    PORTA = 0b00000001;
```

```
//setare anod - pozitie
```

```
    PORTC = 0b00000110;
```

```
//setare catod - caracter
```

```
    Delay_ms(4);
```

```
// #include <util/delay.h>
```

```
    PORTA = 0b00000010;
```

```
    PORTC = 0b01011011;
```

```
    Delay_ms(4);
```

```
}
```

LABORATOR 3 - CERINTE

```
void display(char p, char c){  
    PORTA &= 0b11110000;    // se opreste alimentarea anodului  
    PORTC &= 0b00000000;    // se blocheaza catodul ledurilor  
  
    switch(c){  
        case 0:  
            PORTC |= 0b00111111;  
            break;  
    }  
    switch(p){  
        case 1:  
            PORTA |= 0b00000001;  
            break;  
        case 2:  
            PORTA |= 0b00000010;  
            break;  
    }  
    Delay_ms(4);  
}
```

LABORATOR 3 - CERINTE

1. Afisare numar 4 cifre pe display;

- Unitati -> $N\%10$, Zeci -> $(N/10)\%10$,
- Sute -> $(N/100)\%10$, Mii -> $(N/1000)\%10$;
 - `display(1,val%10);`
 - `display(2,(val/10)%10);`
 - `display(3,(val/100)%10);`
 - `display(4,(val/1000)%10);`

2. Numara crescator cu incrementare de la buton;

3. Numarator cu incrementare de la buton

- Inversarea directiei de numarare functie de potentiometru
- Folositi potentiometrul ca si intrare digitala.

LABORATOR 3 - CERINTE

- Incrementarea unei valori la apasarea butonului (detectia frontului crescator)

```
if(PINA & (1<<5))
```

```
{    if(bp == 0){
```

```
        val++;
```

```
        bp=1;
```

```
    }
```

```
}
```

```
else
```

```
    bp=0;
```