

## Array\_4 28/02/21

```
// Arrays can also contain other arrays.  
// These are called Two Dimensional arrays.
```

```
int LED1 = 2;    // to segA  
int LED2 = 3;    // to segB  
int LED3 = 4;    // to segC  
int LED4 = 5;    // to segD  
int LED5 = 6;    // to segE  
int LED6 = 7;    // to segF  
int LED7 = 8;    // to segG  
int arrayCount = 0;  
int numCount = 0;
```

```
int LEDS[] {LED1,LED2,LED3,LED4,LED5,LED6,LED7}; //normal array  
int Numbers[10][7]{  
    //segA,segB,segC,segD,segE,segF,segG,  
    { 1 , 1 , 1 , 1 , 1 , 1 , 0 }, //ZERO  
    { 0 , 1 , 1 , 0 , 0 , 0 , 0 }, //ONE  
    { 1 , 1 , 0 , 1 , 1 , 0 , 1 }, //TWO  
    { 1 , 1 , 1 , 1 , 0 , 0 , 1 }, //THREE  
    { 0 , 1 , 1 , 0 , 0 , 1 , 1 }, //FOUR  
    { 1 , 0 , 1 , 1 , 0 , 1 , 1 }, //FIVE  
    { 1 , 0 , 1 , 1 , 1 , 1 , 1 }, //SIX  
    { 1 , 1 , 1 , 0 , 0 , 1 , 0 }, //SEVEN  
    { 1 , 1 , 1 , 1 , 1 , 1 , 1 }, //EIGHT  
    { 1 , 1 , 1 , 1 , 0 , 1 , 1 } //NINE  
};
```

//The numbers in the brackets indicate the number of elements in the sections of the array. eg ten groups of seven values. However when recalling these values from the array, the number would be referenced from 0-9 and 0-6.

```
void setup() {  
    pinMode(LED1,OUTPUT);  
    pinMode(LED2,OUTPUT);  
    pinMode(LED3,OUTPUT);  
    pinMode(LED4,OUTPUT);  
    pinMode(LED5,OUTPUT);  
    pinMode(LED6,OUTPUT);  
    pinMode(LED7,OUTPUT);  
}
```

```
void loop() {  
    for(arrayCount = 0;arrayCount < 7;arrayCount++){  
        digitalWrite(LEDS[arrayCount],Numbers[numCount][arrayCount]);  
    }  
    numCount++;  
    if(numCount == 10){numCount = 0;}  
    delay(1000);  
}
```

