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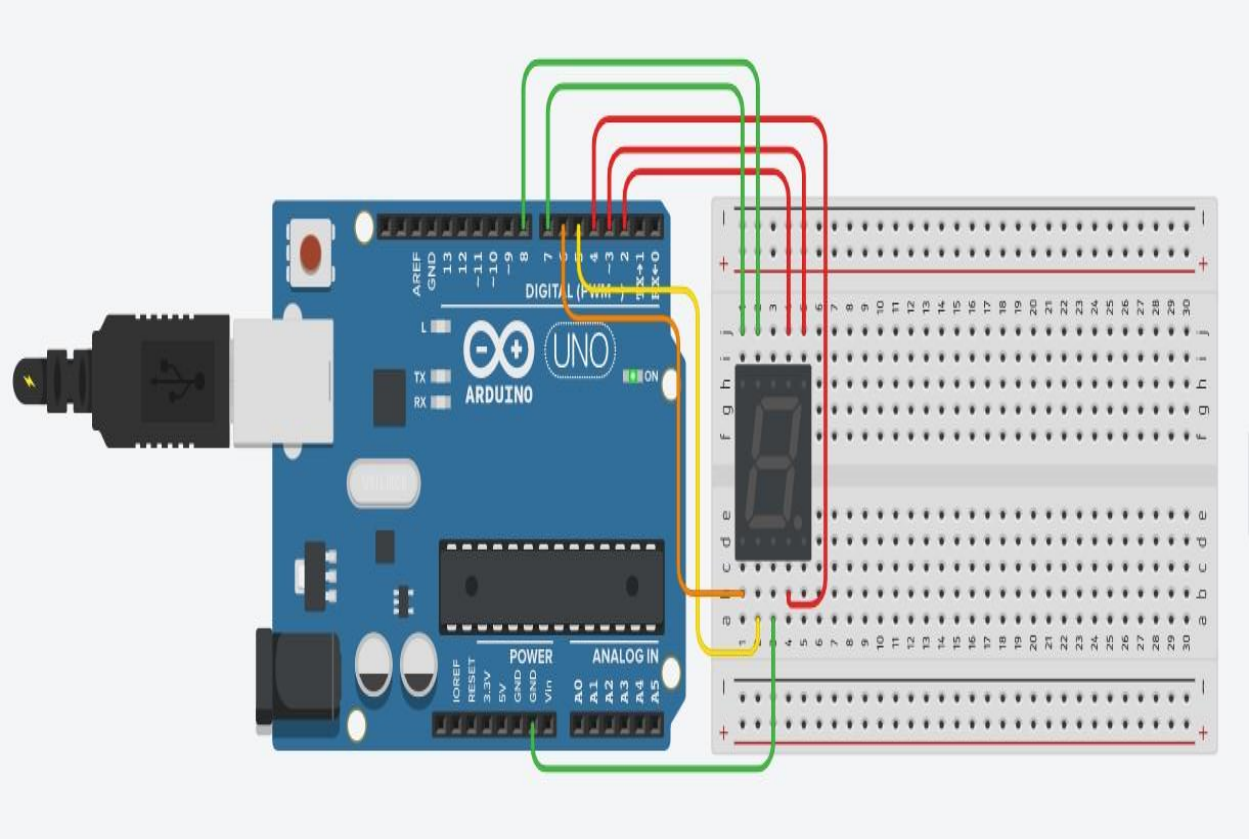
Task: Interfacing Seven Segment Display with the Arduino Board.

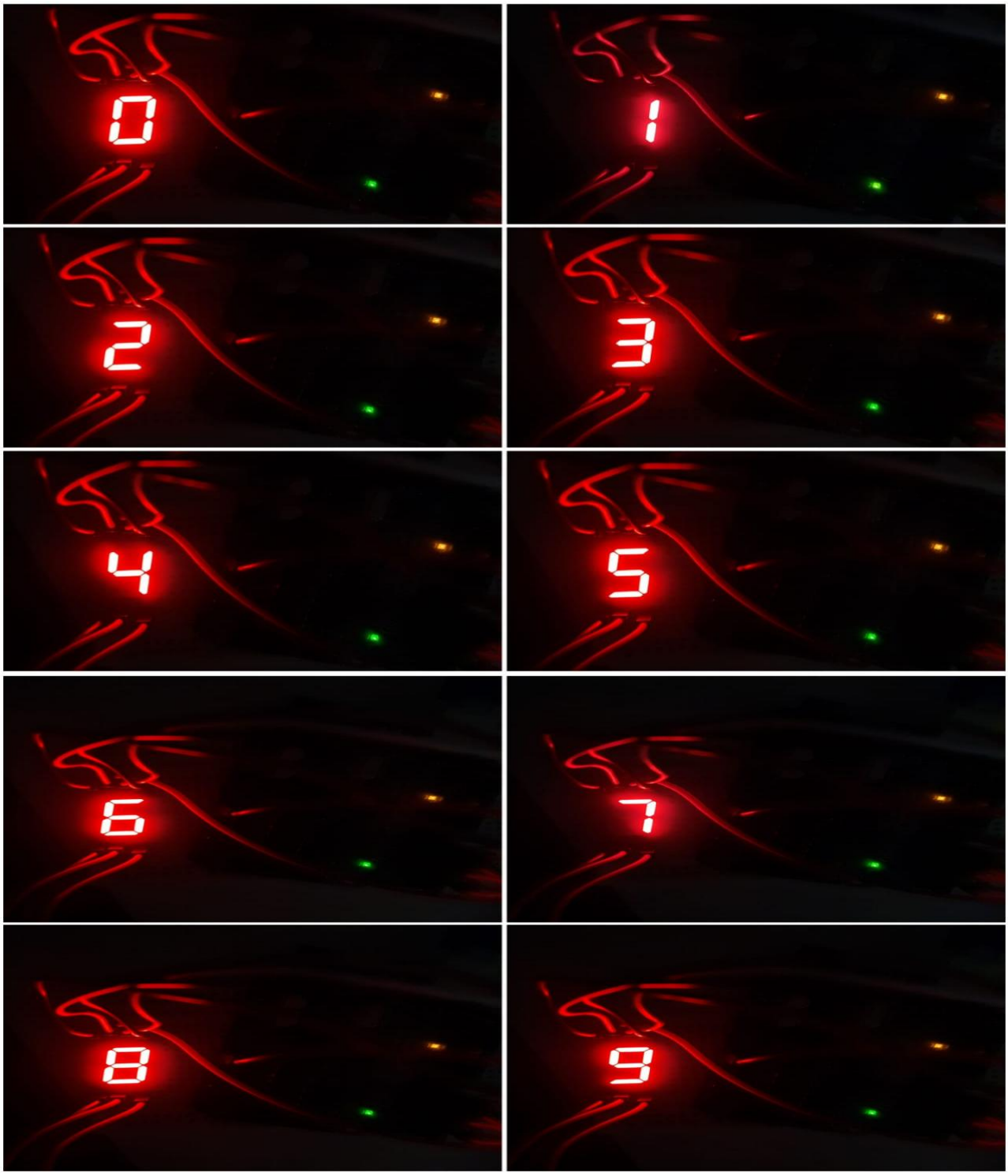
Components:
7 segment display (Common Cathode), Resistor, Bread board, Jumper wire, Arduino Board, USB Cable

About the Project:
7 segment is one type of a display with 7 different led inside it. The leds are arranged in a manner that they can display the digit from 0 – 9. When we arrange all the connections in proper manner with arduino uno, we have to upload the following code to the arduino. After uploading the code we have to verify the wire arrangement of the whole project. We have to arrange the wires according to the code implemented. Connect the a,b,c,d,e,f and g segment terminal to digital pin of the arduino board. After that connect the common terminal to the ground on the arduino board.

Schematic:



Output: (your circuit implementation and its working photo)



Code:

```
void setup() {
  pinMode(2,OUTPUT);
```

```
  pinMode(3,OUTPUT);
  pinMode(4,OUTPUT);
  pinMode(5,OUTPUT);
  pinMode(6,OUTPUT);
  pinMode(7,OUTPUT);
  pinMode(8,OUTPUT);
}

void loop() {
 //0
 digitalWrite(2,HIGH);
 digitalWrite(3,HIGH);
 digitalWrite(4,HIGH);
 digitalWrite(5,HIGH);
 digitalWrite(6,HIGH);
 digitalWrite(7,LOW);
 digitalWrite(8,HIGH);
 delay(1000);

//1
 digitalWrite(2,LOW);
 digitalWrite(3,HIGH);
 digitalWrite(4,HIGH);
 digitalWrite(5,LOW);
 digitalWrite(6,LOW);
 digitalWrite(7,LOW);
 digitalWrite(8,LOW);
 delay(1000);

//2
 digitalWrite(2,HIGH);
 digitalWrite(3,HIGH);
 digitalWrite(4,LOW);
 digitalWrite(5,HIGH);
 digitalWrite(6,HIGH);
 digitalWrite(7,HIGH);
 digitalWrite(8,LOW);
 delay(1000);

//3
 digitalWrite(2,HIGH);
 digitalWrite(3,HIGH);
 digitalWrite(4,HIGH);
 digitalWrite(5,HIGH);
 digitalWrite(6,LOW);
 digitalWrite(7,HIGH);
 digitalWrite(8,LOW);
 delay(1000);
```

```
//4
 digitalWrite(2,LOW);
 digitalWrite(3,HIGH);
 digitalWrite(4,HIGH);
 digitalWrite(5,LOW);
 digitalWrite(6,LOW);
 digitalWrite(7,HIGH);
 digitalWrite(8,HIGH);
 delay(1000);

//5
 digitalWrite(2,HIGH);
 digitalWrite(3,LOW);
 digitalWrite(4,HIGH);
 digitalWrite(5,HIGH);
 digitalWrite(6,LOW);
 digitalWrite(7,HIGH);
 digitalWrite(8,HIGH);
 delay(1000);

//6
 digitalWrite(2,HIGH);
 digitalWrite(3,LOW);
 digitalWrite(4,HIGH);
 digitalWrite(5,HIGH);
 digitalWrite(6,HIGH);
 digitalWrite(7,HIGH);
 digitalWrite(8,HIGH);
 delay(1000);

//7
 digitalWrite(2,HIGH);
 digitalWrite(3,HIGH);
 digitalWrite(4,HIGH);
 digitalWrite(5,LOW);
 digitalWrite(6,LOW);
 digitalWrite(7,LOW);
 digitalWrite(8,LOW);
 delay(1000);

//8
 digitalWrite(2,HIGH);
 digitalWrite(3,HIGH);
 digitalWrite(4,HIGH);
 digitalWrite(5,HIGH);
 digitalWrite(6,HIGH);
 digitalWrite(7,HIGH);
 digitalWrite(8,HIGH);
 delay(1000);
```

```
//9
 digitalWrite(2,HIGH);
 digitalWrite(3,HIGH);
 digitalWrite(4,HIGH);
 digitalWrite(5,HIGH);
 digitalWrite(6,LOW);
 digitalWrite(7,HIGH);
 digitalWrite(8,HIGH);
 delay(1000);
}
```

Application:

The application of 7 segment display can be optimized in many ways. It can be used in Digital clocks, Digital speedometer, Digital machines which needs to display digit only, In counter projects in which we have to display digit. It can also be used in many combinations like 4 Digit 7 Segment display, 2 Digit and 7 Segment etc. It is also used in measuring instruments, where they used to show the exact measurement in a digital form.

Conclusion:

From the above task we came to know the exact arrangement of how to operate 7 segment display. When we arrange all the wire and display in a proper form the we are able to display digits from 0 to 9 on it. We also came to know the different uses of it and how to use it. By making combination of the different such displays we can make multiple digit display. We can display the date or time which needs multiple digits in a digital way rather then a manual way. After doing all this we got a brief idea of 7 segment display and uses of it… Thank you

Your sincerely,

Shashank Bagda