Dhaka International University

Department of Computer Science & Engineering

Lab Report

Course Name: Peripherals & Interfacing Lab
Course Code: CSE - 404

Submitted By	Submitted To
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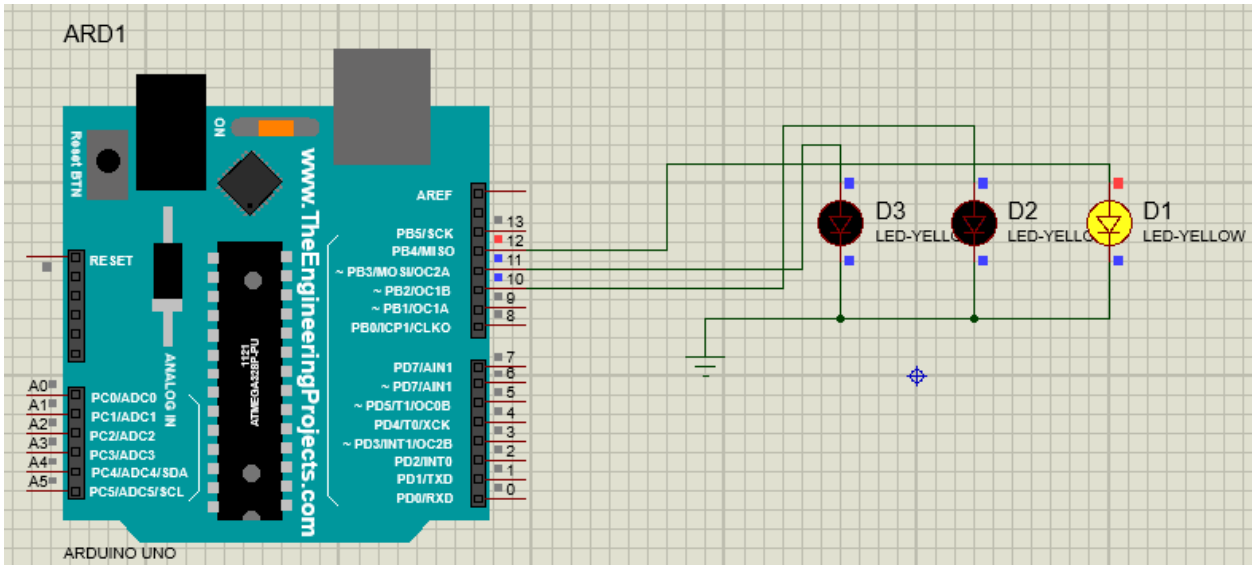
Light-Emitting Diode (LED)

Source Code:

```
void setup() {
  pinMode(12, OUTPUT);
  pinMode(11, OUTPUT);
  pinMode(10, OUTPUT);
}

void loop() {
  digitalWrite(12, HIGH);
  delay(500);
  digitalWrite(12, LOW);
  delay(500);
  digitalWrite(11, HIGH);
  delay(500);
  digitalWrite(11, LOW);
  delay(500);
  digitalWrite(10, HIGH);
  delay(500);
  digitalWrite(10, LOW);
  delay(500);
}
```

Output



Seven Segment Display

Source Code:

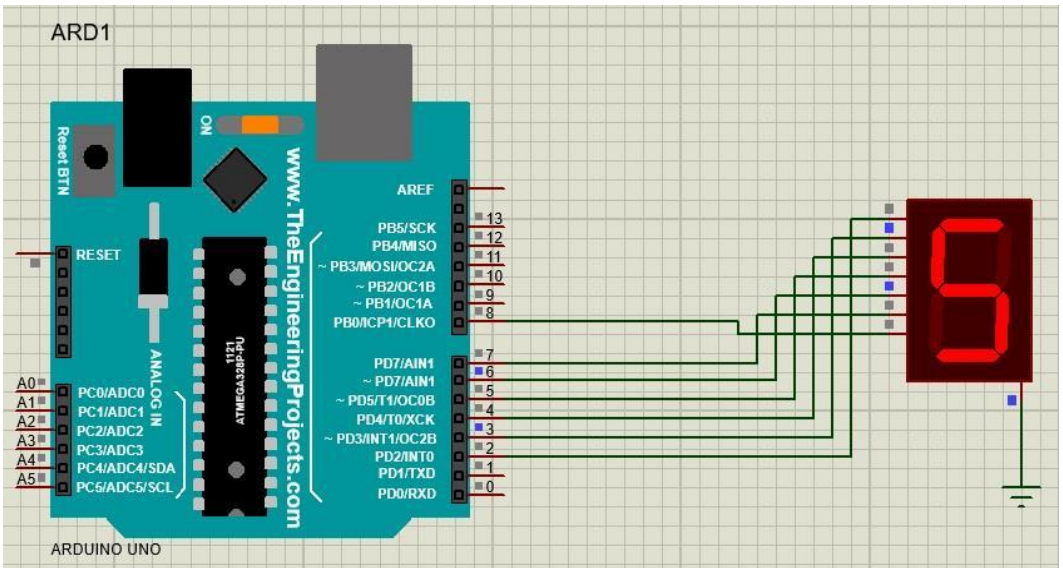
```
void setup() {
  pinMode(2, OUTPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
  pinMode(5, OUTPUT);
  pinMode(6, OUTPUT);
  pinMode(7, OUTPUT);
  pinMode(8, OUTPUT);

}
//Function
void loop() {
Zero();
One();
Two();
Three();
Four();
Five();
Six();
Seven();
Eight();
Nine();
}

void Zero() {
 digitalWrite(2, HIGH);
 digitalWrite(3, HIGH);
 digitalWrite(4, HIGH);
 digitalWrite(5, HIGH);
 digitalWrite(6, HIGH);
 digitalWrite(7, HIGH);
 digitalWrite(8, LOW);
 delay(1000);
}

void One(){
 digitalWrite(2, LOW);
 digitalWrite(3, HIGH);
 digitalWrite(4, HIGH);
 digitalWrite(5, LOW);
 digitalWrite(6, LOW);
 digitalWrite(7, LOW);
```

```
 digitalWrite(8, LOW);
 delay(1000);
}

void Two(){
 digitalWrite(2, HIGH);
 digitalWrite(3, HIGH);
 digitalWrite(4, LOW);
 digitalWrite(5, HIGH);
 digitalWrite(6, HIGH);
 digitalWrite(7, LOW);
 digitalWrite(8, HIGH);
 delay(1000);
}

void Three(){
 digitalWrite(2, HIGH);
 digitalWrite(3, HIGH);
 digitalWrite(4, HIGH);
 digitalWrite(5, HIGH);
 digitalWrite(6, LOW);
 digitalWrite(7, LOW);
 digitalWrite(8, HIGH);
 delay(1000);
}

void Four(){
 digitalWrite(2, LOW);
 digitalWrite(3, HIGH);
 digitalWrite(4, HIGH);
 digitalWrite(5, LOW);
 digitalWrite(6, LOW);
 digitalWrite(7, HIGH);
 digitalWrite(8, HIGH);
 delay(1000);
}

void Five(){
 digitalWrite(2, HIGH);
 digitalWrite(3, LOW);
 digitalWrite(4, HIGH);
 digitalWrite(5, HIGH);
 digitalWrite(6, LOW);
 digitalWrite(7, HIGH);
```

```
 digitalWrite(8, HIGH);
 delay(1000);
}

 void Six(){
 digitalWrite(2, HIGH);
 digitalWrite(3, LOW);
 digitalWrite(4, HIGH);
 digitalWrite(5, HIGH);
 digitalWrite(6, HIGH);
 digitalWrite(7, HIGH);
 digitalWrite(8, HIGH);
 delay(1000);
 }

void Seven(){
 digitalWrite(2, HIGH);
 digitalWrite(3, HIGH);
 digitalWrite(4, HIGH);
 digitalWrite(5, LOW);
 digitalWrite(6, LOW);
 digitalWrite(7, LOW);
 digitalWrite(8, LOW);
 delay(1000);
}

void Eight(){
 digitalWrite(2, HIGH);
 digitalWrite(3, HIGH);
 digitalWrite(4, HIGH);
 digitalWrite(5, HIGH);
 digitalWrite(6, HIGH);
 digitalWrite(7, HIGH);
 digitalWrite(8, HIGH);
 delay(1000);
}

 void Nine(){
 digitalWrite(2, HIGH);
 digitalWrite(3, HIGH);
 digitalWrite(4, HIGH);
 digitalWrite(5, HIGH);
 digitalWrite(6, LOW);
 digitalWrite(7, HIGH);
```

```
 digitalWrite(8, HIGH);
 delay(1000);
}
```

Output



Liquid Crystal Display (LCD)

Source Code:

```
int a = 13;
int b = 12;
int c = 11;
int d = 10;
int e = 9;
int f = 8;
int g = 7;
int i;
int count = 0;

void setup() {
  // put your setup code here, to run once:
for (int i = 7; i <= 13; i++){
pinMode(i, OUTPUT);
 }
}
```

```
void loop() {
  for (i = 0; i <= 9; i++) {
    lightNumer(i);
  delay(500);
   }
}
void lightNumer(int number){
switch (number) {
       case 0:
        digitalWrite(a, 1);
        digitalWrite(b, 1);
        digitalWrite(c, 1);
        digitalWrite(d, 1);
        digitalWrite(e, 1);
        digitalWrite(f, 1);
        digitalWrite(g, 0);
        break;
        case 1:
        digitalWrite(a, 0);
        digitalWrite(b, 1);
        digitalWrite(c, 1);
        digitalWrite(d, 0);
        digitalWrite(e, 0);
        digitalWrite(f, 0);
        digitalWrite(g, 0);
        break;
        case 2:
        digitalWrite(a, 1);
        digitalWrite(b, 1);
        digitalWrite(c, 0);
        digitalWrite(d, 1);
        digitalWrite(e, 1);
        digitalWrite(f, 0);
        digitalWrite(g, 1);
        break;
        case 3:
        digitalWrite(a, 1);
        digitalWrite(b, 1);
        digitalWrite(c, 1);
        digitalWrite(d, 1);
        digitalWrite(e, 0);
        digitalWrite(f, 0);
        digitalWrite(g, 1);
        break;
```

```
case 4:
digitalWrite(a, 0);
digitalWrite(b, 1);
digitalWrite(c, 1);
digitalWrite(d, 0);
digitalWrite(e, 0);
digitalWrite(f, 1);
digitalWrite(g, 1);
break;
case 5:
digitalWrite(a, 1);
digitalWrite(b, 0);
digitalWrite(c, 1);
digitalWrite(d, 1);
digitalWrite(e, 0);
digitalWrite(f, 1);
digitalWrite(g, 1);
break;
case 6:
digitalWrite(a, 1);
digitalWrite(b, 0);
digitalWrite(c, 1);
digitalWrite(d, 1);
digitalWrite(e, 1);
digitalWrite(f, 1);
digitalWrite(g, 1);
break;
case 7:
digitalWrite(a, 1);
digitalWrite(b, 1);
digitalWrite(c, 1);
digitalWrite(d, 0);
digitalWrite(e, 0);
digitalWrite(f, 0);
digitalWrite(g, 0);
break;
case 8:
digitalWrite(a, 1);
digitalWrite(b, 1);
digitalWrite(c, 1);
digitalWrite(d, 1);
digitalWrite(e, 1);
digitalWrite(f, 1);
digitalWrite(g, 1);
```

```
        break;
        case 9:
        digitalWrite(a, 1);
        digitalWrite(b, 1);
        digitalWrite(c, 1);
        digitalWrite(d, 1);
        digitalWrite(e, 0);
        digitalWrite(f, 1);
        digitalWrite(g, 1);
        break;
        }
}
```

Output