Ex: 8   **LED Blink and LED Pattern**
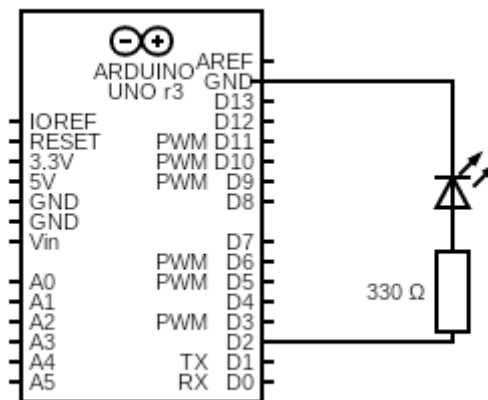
Aim:

To implement LED Blink and LED Pattern with Arduino Uno.

Components Required:

- Arduino Uno Board
- LED
- 330 ohm Resister
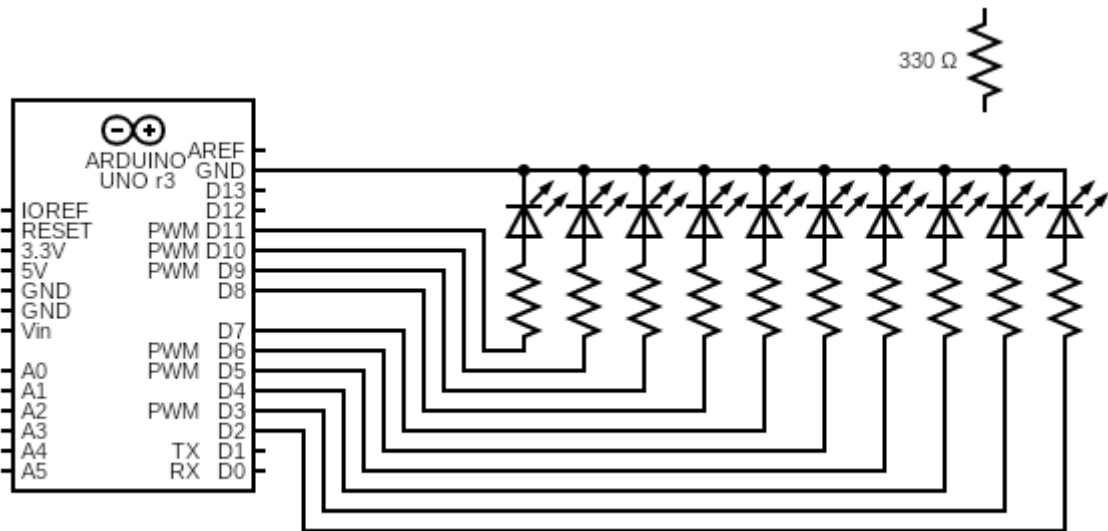- Jumpers

Circuit Connection(LED Blink):

Sketch (LED Blik)

```
int led1 = 2; // Pin the LED is connected to
void setup() {
 pinMode(led1, OUTPUT);
 digitalWrite(led1, LOW);
}

void loop() {
 delay(500);
 digitalWrite(led1, HIGH);
 delay(550);
 digitalWrite(led1, LOW);
}
```

Circuit Connection(LED Pattern):

Sketch (LED Pattern)

```
//Set Digital PIN 2 to 11 as OUTPUT
void setup() {
 int i;
 for(i=2;i<=11;i++)
 {
  pinMode(i,OUTPUT);
  digitalWrite(i, LOW);
 }
}

void loop() {
 int i;
 for(i=2;i<=11;i++)
 {
  delay(100);
  digitalWrite(i, HIGH);
 }
 for(i=11;i>=2;i--)
 {
  delay(100);
  digitalWrite(i, LOW);
 }
```

```
for(i=0;i<5;i++)
{
  delay(250);
  digitalWrite(i+2, HIGH);
  digitalWrite(11-i, HIGH);
}
for(i=0;i<5;i++)
{
  delay(250);
  digitalWrite(i+2, LOW);
  digitalWrite(11-i, LOW);
}
}
```

Result:

      Thus Arduino Uno board is utilized to perform LED blink and LED pattern.