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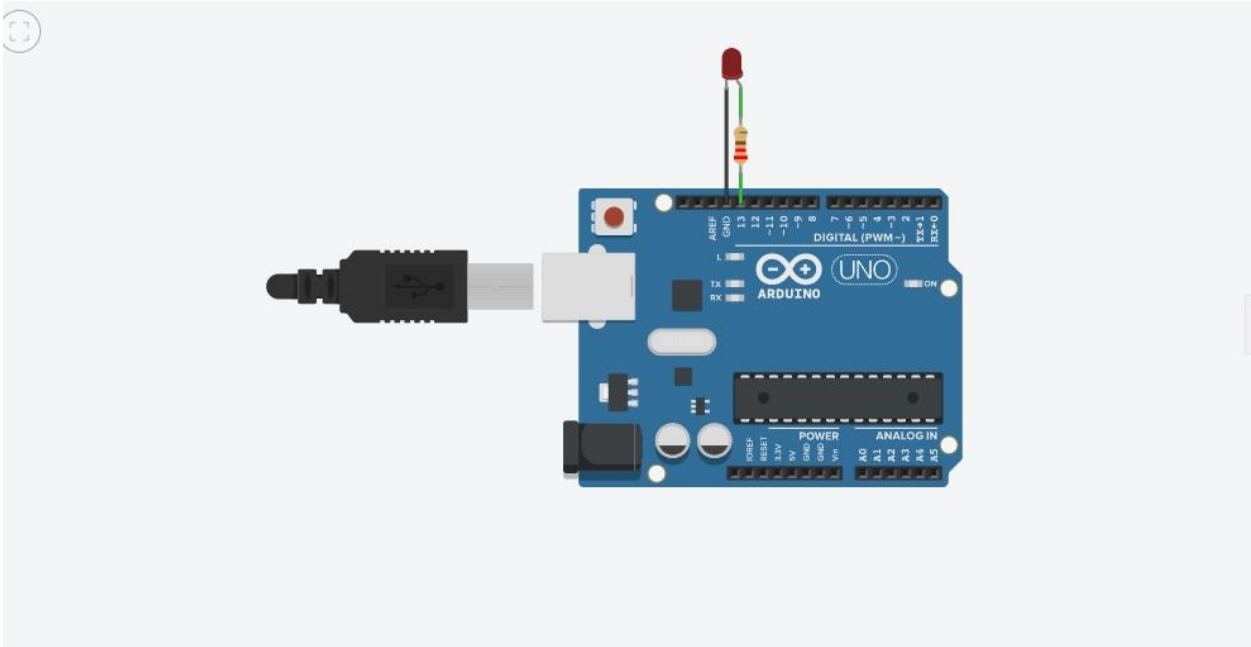
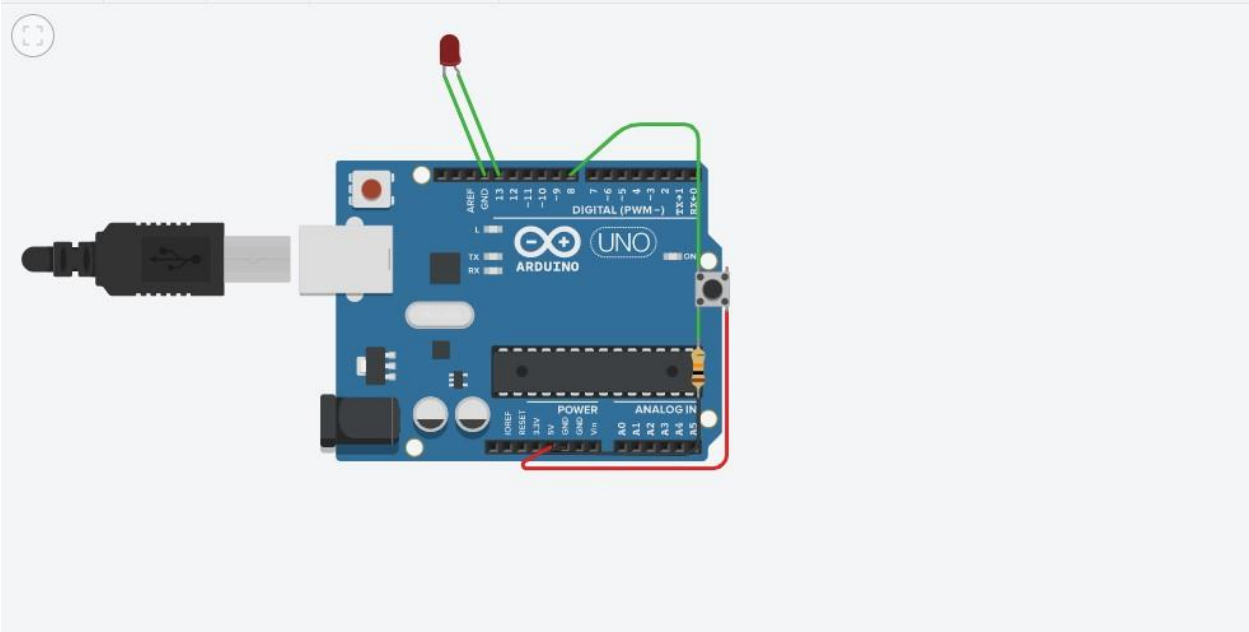
CODE FOR LED BLINKING PATTERNS

```
int ledPin=13;
void setup()
{
pinMode(ledPin,OUTPUT);
}

void loop()
{
  digitalWrite(ledPin,HIGH);
  delay(1000);
  digitalWrite(ledPin,LOW);
  delay(1000);
}
```



CODE FOR CONTROLLING LED WITH BUTTON

```
int switchPin = 8; int ledPin =
13; boolean lastButton =
LOW; boolean currentButton
= LOW; boolean ledOn =
false;

void setup()
{
  pinMode(switchPin, INPUT);
  pinMode(ledPin, OUTPUT);
}

boolean debounce(boolean last)
{
  boolean current = digitalRead(switchPin);
  if (last != current)
  {
    delay(5);
    current = digitalRead(switchPin);
  } return
  current;
}

void loop()
{
  currentButton = debounce(lastButton); if
  (lastButton == LOW && currentButton == HIGH)
  {
    ledOn = !ledOn;
  }
  lastButton = currentButton;

  digitalWrite(ledPin, ledOn);

}
```



CODE FOR CONTROLLING LED WITH POTENTIOMETER

```
int LED_PIN = 3;  // the PWM pin the LED is attached to

// the setup routine runs once when you press reset:
void setup() {
  // initialize serial communication at 9600 bits per second:
  Serial.begin(9600);

  // declare LED pin to be an output:
  pinMode(LED_PIN, OUTPUT);
}

// the loop routine runs over and over again forever:
void loop() {
  // reads the input on analog pin A0 (value between 0 and
  1023) int analogValue = analogRead(A0);
```

```
  // scales it to brightness (value between 0 and 255)
  int brightness = map(analogValue, 0, 1023, 0, 255);
  // sets the brightness LED that connects to  pin 3
  analogWrite(LED_PIN, brightness);

  // print out the value
  Serial.print("Analog: ");
  Serial.print(analogValue);
  Serial.print(", Brightness: ");
  Serial.println(brightness);
  delay(100);
}
```