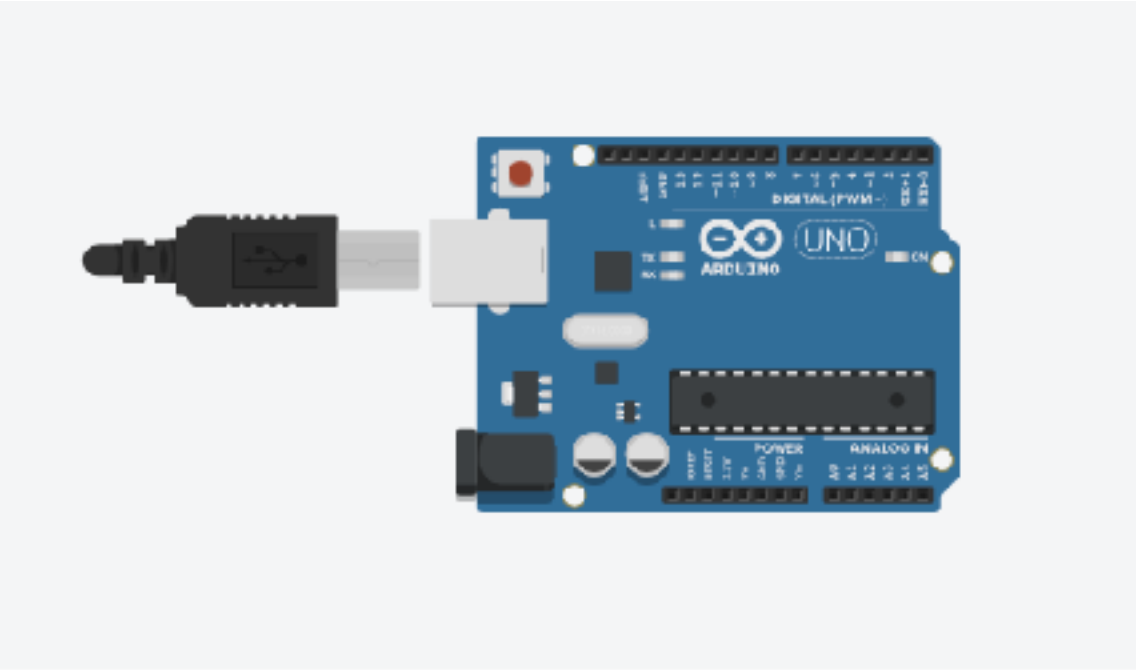
19AIE103 – Introduction to Drones

Lab Worksheet – 2

Introduction to Arduino module

1. Write an Arduino program to blink the on-board LED

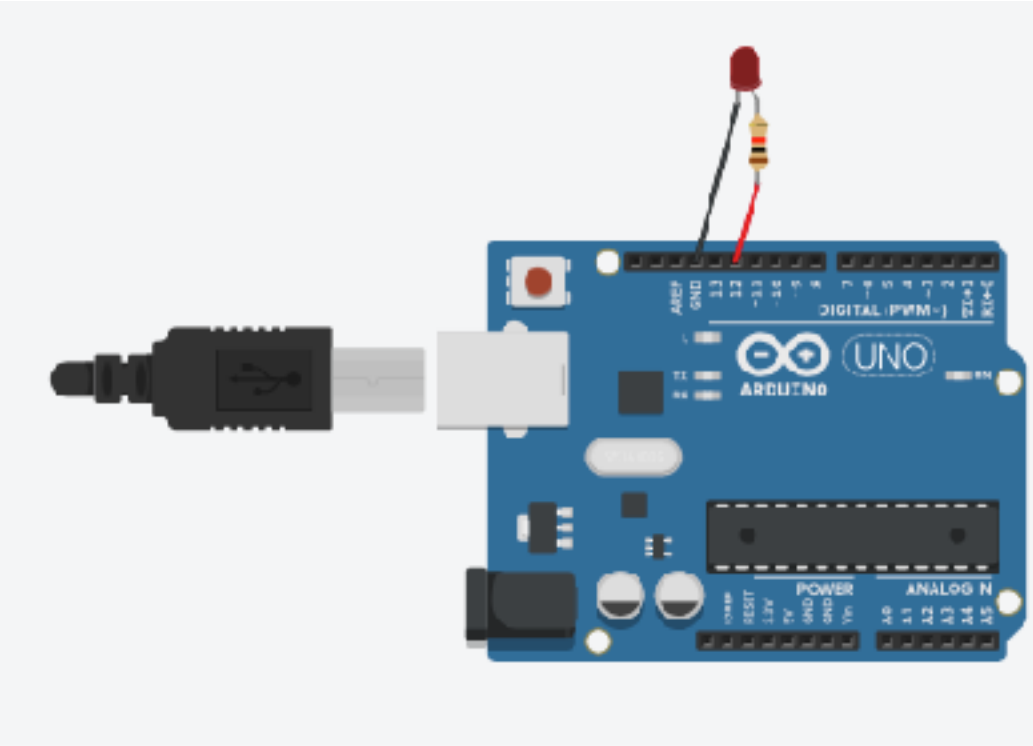


Program

```
void setup()
{
  pinMode(LED_BUILTIN, OUTPUT);
}

void loop()
{
  digitalWrite(LED_BUILTIN, HIGH);
  delay(1000); // Wait for 1000 millisecond(s)
  digitalWrite(LED_BUILTIN, LOW);
  delay(1000); // Wait for 1000 millisecond(s)
}
```

2. Write an Arduino program to blink an externally connected LED

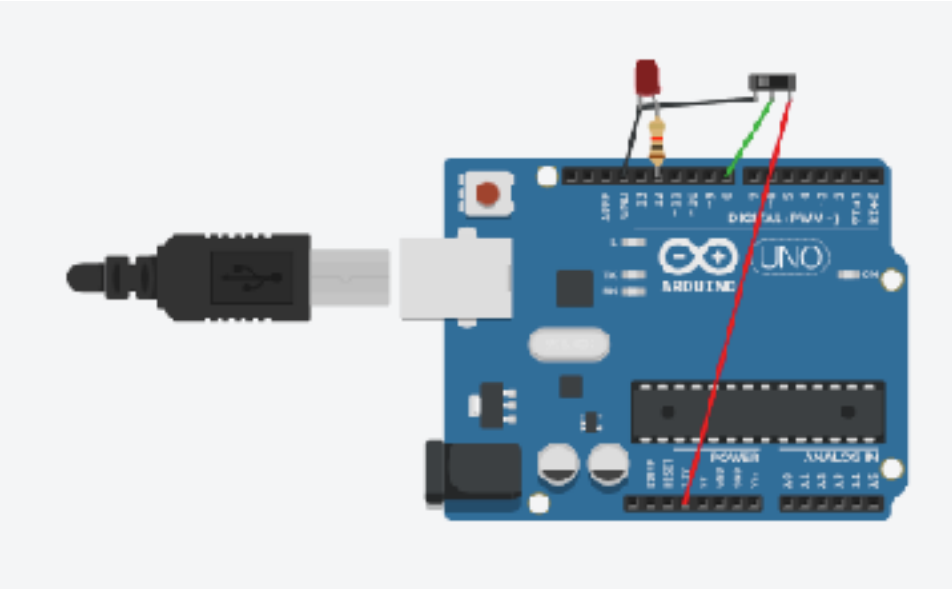


Program

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

void loop()
{
  digitalWrite(12, HIGH);
  delay(1000); // Wait for 1000 millisecond(s)
  digitalWrite(12, LOW);
  delay(1000); // Wait for 1000 millisecond(s)
}
```

3. Write an Arduino program to control a LED using a switch



Program

```
void setup()
{
  pinMode(12, OUTPUT);
  pinMode(8, INPUT);
}

void loop()
{
  int switch_status = 0;
  switch_status = digitalRead(8);
  if(switch_status == 1)
    digitalWrite(12, HIGH);
  else
    digitalWrite(12, LOW);
}
```

Assignment

1. Design a circuit and write an program to control 4 LED's turning on and off sequentially using Arduino.
2. Write an Arduino program to control the above sequence of LED on/off pattern using a switch