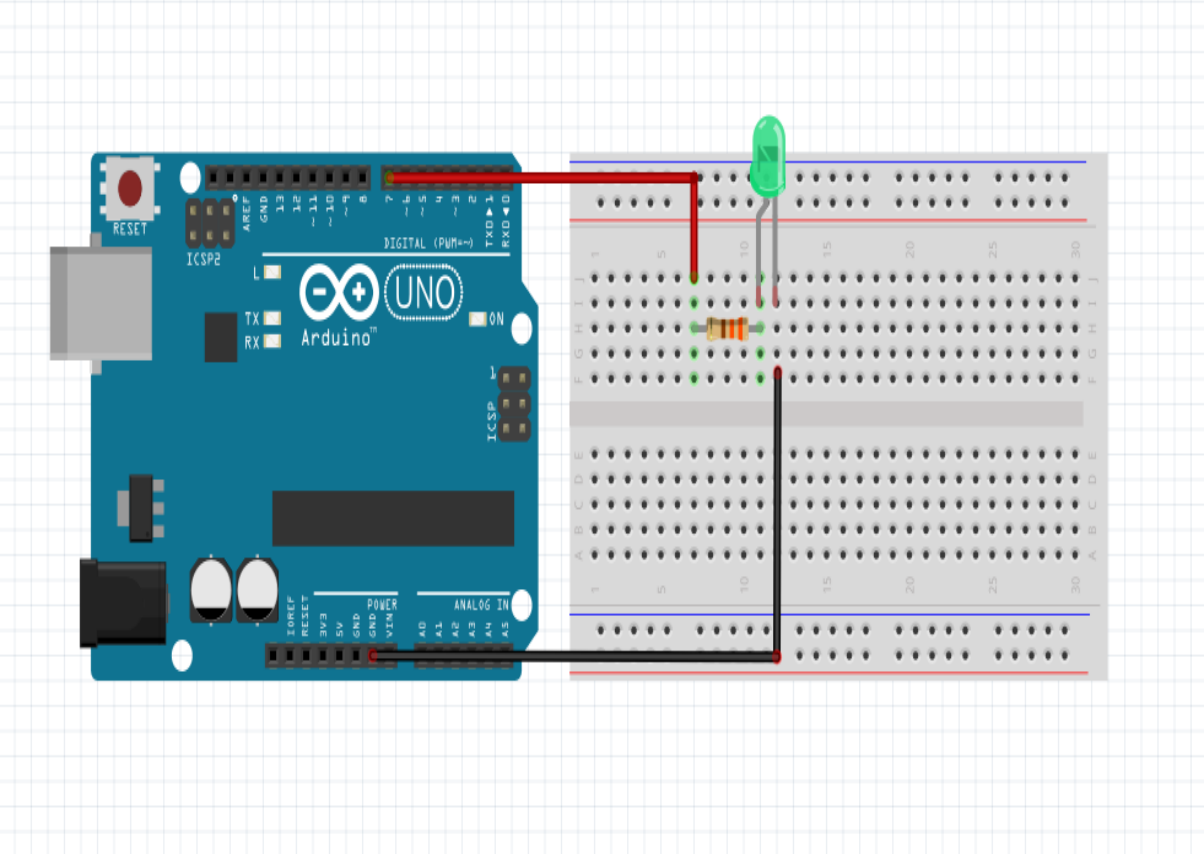
1: LED blink Experiment

This Experiment uses the built-in LED that most Arduino boards have. This LED is connected to a digital pin and its number may vary from board type to board type. To make your life easier, we have a constant that is specified in every board descriptor file. This constant is *LED_BUILTIN* and allows you to control the built-in LED easily.

If you want to lit an external LED with this sketch, you need to build this circuit, where you connect one end of the resistor to the digital pin correspondent to the *LED_BUILTIN* constant. **Connect the long leg of the LED (the positive leg, called the anode) to the other end of the resistor. Connect the short leg of the LED (the negative leg, called the cathode) to the GND.** In the diagram below we show an UNO board that has D13 as the LED_BUILTIN value.

The value of the resistor in series with the LED may be of a different value than 220 ohm; the LED will lit up also with values up to 1K ohm.




```
// the setup function runs once when you press reset or power the board
void setup() {
  // initialize digital pin LED_BUILTIN as an output.

  pinMode(6, OUTPUT);

}

// the loop function runs over and over again forever
void loop() {
```

```
 digitalWrite(6, HIGH);    // turn the LED connected to 8th pin OFF by making the voltage LOW

  delay(100);           // wait for a second

  digitalWrite(6, LOW);    // turn the LED connected to 8th pin OFF by making the voltage LOW

  delay(100);           // wait for a second


 }
```

Steps :

1. First do the wiring as shown in the picture
2. Open Arduino IDE Software and write down your code, or download the code below and open it
3. Choose your own Arduino board (in this case Arduino Uno), by selecting Tools > Board > Arduino/Geniuno Uno
4. Choose your COM Port (usually it appears only one existing port), Tools > Port > COM.. (If there are more than one ports, try it one by one)
5. Upload your code by pressing Ctrl + U or Sketch > Upload
6. To display the measurement data you can use Serial Monitor by pressing Ctrl + Shift + M (make sure that the baudrate speed is 9600)