

Arduino



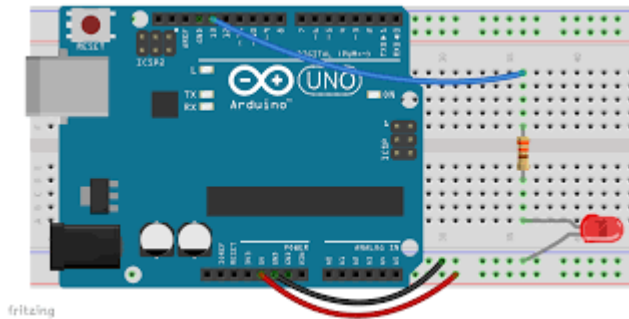
I'm Learning about Making an LED Blink

Card **1** of **2**

1 Read the Getting Started and C Programming introductions before starting this exercise or a Mentor will give you a basic introduction to this activity.

2 First we need to make a simple circuit using the Arduino and a breadboard. The sample Arduino program expects an LED on to be wired on Pin 13.

Top Tip: Make sure the long leg (Anode) of the LED is on positive side of the circuit, in this case in line with the resistor.



3 Take a look at a simple program to make the LED Blink. For the Arduino programs are called Sketches. Open up the Arduino software and use the Open Icon to look at the sketch "Blink" in the Basics section of the Arduino Examples library.

Examine the code and read the comments. This will help you understand how a simple program can be written for the Arduino. Check that you have the right pin connected according to your program.

4 Now click the Upload icon to load the program to the Arduino. You will see the RX and TX lights on the Arduino flicker and a confirmation message. A few seconds later you should see your program in action!

What's next?

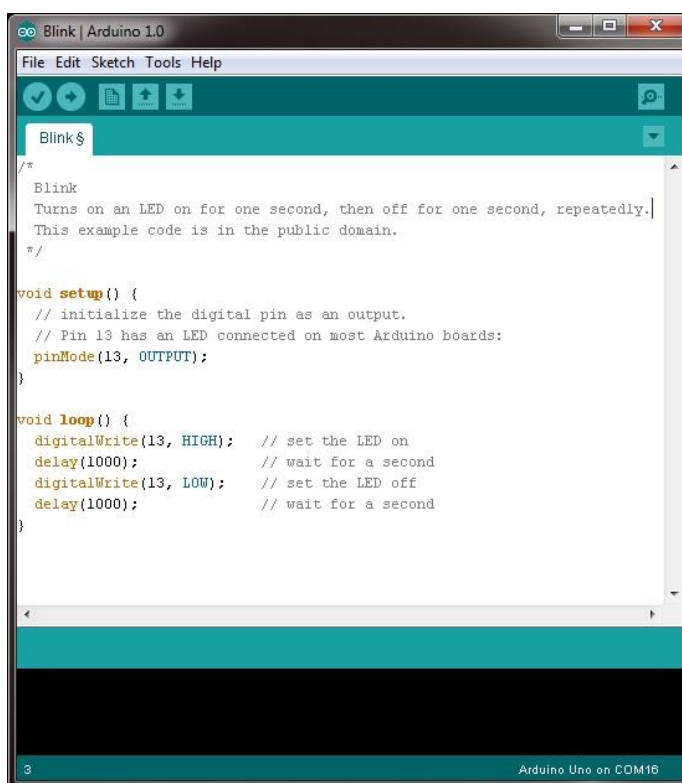
Try changing

1. The timing interval
2. The Port number (don't forget to rewire)
3. Add another LED to you board and add code to make that blink
4. Move on to the next Challenge!

For more information and additional lessons try the following useful links:

<http://www.robotshop.com/blog/en/arduino-5-minute-tutorials-lesson-2-basic-code-blink-led-2-3639>

Sample Code:

A screenshot of the Arduino IDE interface. The title bar reads "Blink | Arduino 1.0". The menu bar includes "File", "Edit", "Sketch", "Tools", and "Help". Below the menu bar is a toolbar with icons for opening files, saving, and uploading. The main text area contains the following code:

```
/*
 * Blink
 * Turns on an LED on for one second, then off for one second, repeatedly.
 * This example code is in the public domain.
 */

void setup() {
  // initialize the digital pin as an output.
  // Pin 13 has an LED connected on most Arduino boards:
  pinMode(13, OUTPUT);
}

void loop() {
  digitalWrite(13, HIGH); // set the LED on
  delay(1000);            // wait for a second
  digitalWrite(13, LOW);  // set the LED off
  delay(1000);            // wait for a second
}
```

The status bar at the bottom indicates "3" and "Arduino Uno on COM16".