Introduction to Arduino
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What is Arduino?

An open-source electronics prototyping platform.
What can you do with it?

*Interactive objects*
*Interactive prototypes*
*Interactive art*
*Interactive spaces*
*Interactive ...*
Earthwalk
Jens Franke & Thomas Gläser
BunnyBot
Ane Eline Sørensen & Nunzia Coco
Arduino Hardware

Photos by SparkFun Electronics
What’s a microcontroller?
Arduino Software

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

// Pin 13 has an LED connected on most Arduino boards.
// give it a name:
int led = 13;

// the setup routine runs once when you press reset:
void setup()
{
  // initialize the digital pin as an output.
  pinMode(led, OUTPUT);
}

// the loop routine runs over and over again forever:
void loop()
{
  digitalWrite(led, HIGH);  // turn the LED on (HIGH is the voltage level)
  delay(1000);              // wait for a second
  digitalWrite(led, LOW);   // turn the LED off by making the voltage LOW
  delay(1000);              // wait for a second
}
```

Arduino Uno on /dev/tty.usbserial-A900J2P0
Arduino vs. Processing

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}

/*
 * Mouse 2D.
 * Moving the mouse changes the position and size of each box.
 */

void setup()
{
    size(200, 200);
    noStroke();
    rectMode(CENTER);
}

void draw()
{
    background(51);
    fill(255, 204);
    rect(mouseX, height/2, mouseY/2+13, mouseY/2+13);
    fill(255, 204);
    int inverseX = width-mouseX;
    int inverseY = height-mouseY;
    rect(inverseX, height/2, (inverseX/2)+18, (inverseY/2)+19);
}
ProtoSnap LilyPad Board
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Shall we get started?