What is mBlock?

This is an easy one. It’s a version of Scratch that works with Arduino.

All of you have already done Scratch right?

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What is mBlock?

- Opensource modification of MIT's Scratch
- Modified to communicate with Arduino boards (...and many others)
- Available at **https://ide.mblock.cc** (...don't worry, we'll show you the link again later)

Slides available at: http://a9i.sg/huayi

What is mBlock?

Why use mBlock?

- Code is very similar to Arduino
- Block-based, so less likely to make mistakes

Arduino

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

void loop() {
  digitalWrite(13, HIGH);
  delay(1000);
  digitalWrite(13, LOW);
  delay(1000);
}
```

mBlock

Slides available at: http://a9i.sg/huayi

What is mBlock?

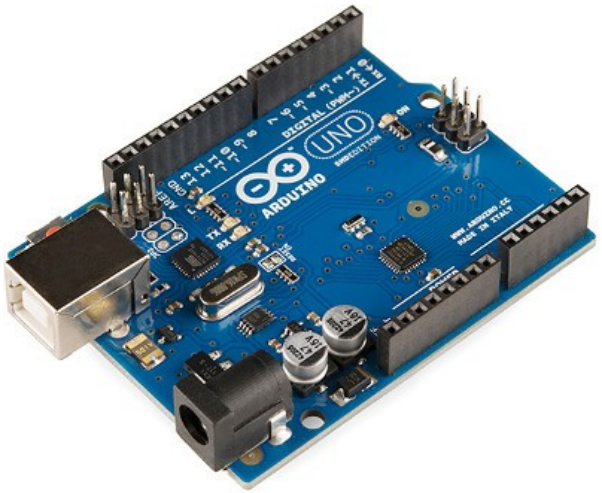
Live Mode

- Code runs in the computer and sends commands to the Arduino

Runs on Computer

Commands
(eg. digital write)

Readings
(eg. digital read)



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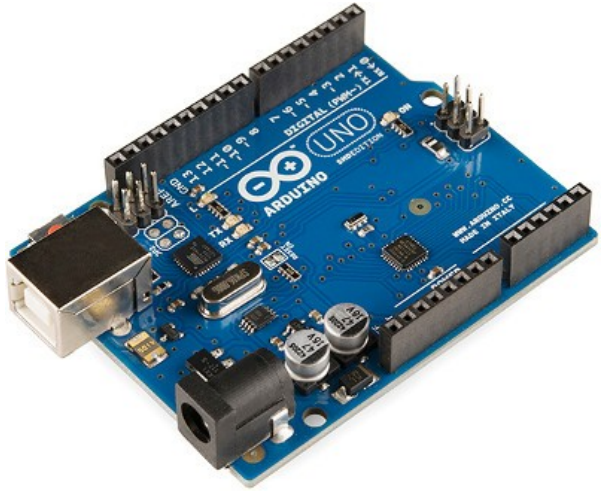
What is mBlock?

Upload Mode

- Code is compiled, uploaded to the Arduino, and runs on the Arduino

Convert to Arduino code and uploaded



Runs on Arduino

Software Connection

1) Look for this icon and run it
(mLink helps connect browser to Arduino)

mLink

2) Visit **https://ide.mblock.cc** to start mBlock
Select File → New

3) Under “Devices” delete “Codey”
Then click “add(+)” and select “Arduino Uno”

Get rid of this guy

Add this one instead

Slides available at: http://a9i.sg/huayi

Connect & Update

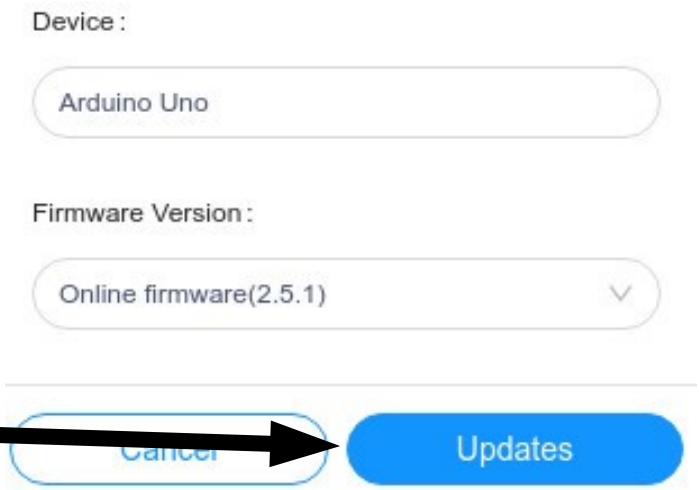
4) Switch to “Live” mode and “Connect”

5) You may need to check “Show all connectable devices” and select a com port

6) If 

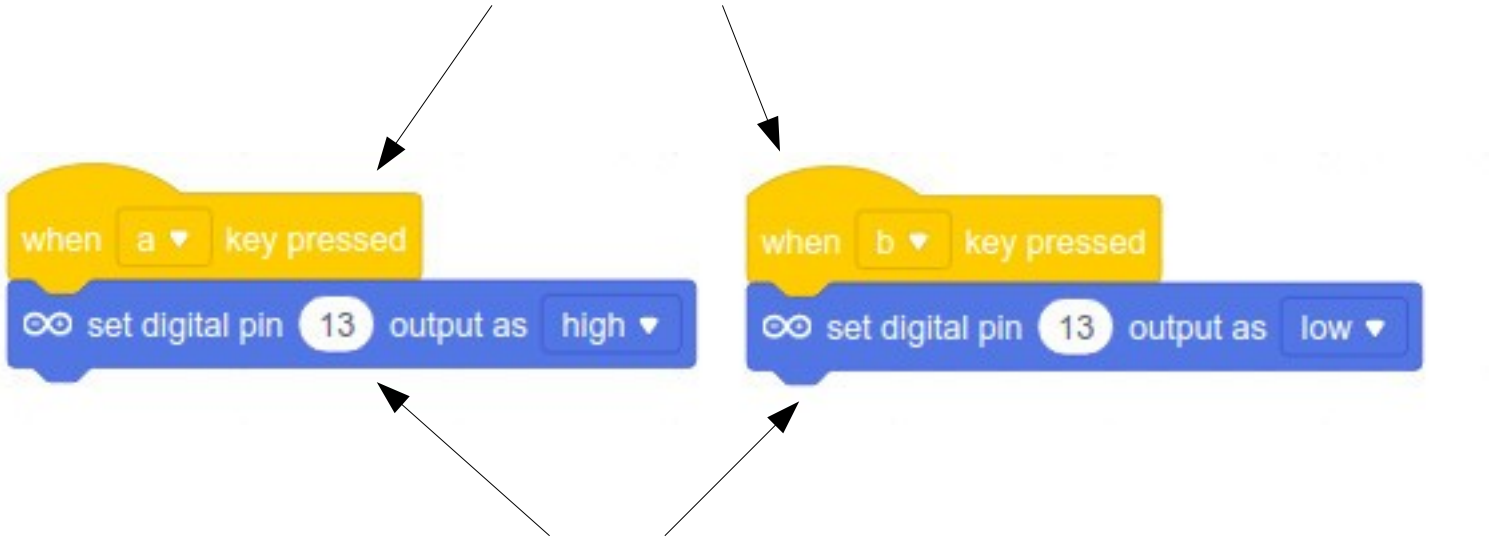
appears, click on it followed by 

and “Updates”



First Program

These are key press “events” (found under “Control”).
They run the script beneath them when their keys are pressed.
(If greyed out, check that you’re connected in “Live” mode)



These turn digital pin 13 on and off.
Digital pin 13 is connected to a built-in LED, so you can see its effect without having to connect anything.

Test it out!

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