

Using TINKERCAD Block Coding to Code your Arduino

For Arduino beginners, this will help you without the knowledge of the C++ programming language, write a program, that is, assemble a program from blocks and upload it to the Arduino board. Instead of writing code, worrying about syntax, and (mis)placing semicolons, curly brackets etc, this allows you to easily visually program with a snapped-together list of code blocks.

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-14/8/2022.



Design Brief- We will use Tinkercad Block Coding for the Blink Sketch, convert it to text, copy it and paste it into the Arduino IDE and Upload and run the Blink Sketch on your Arduino Board.

1—Join or Log into Tinkercad.

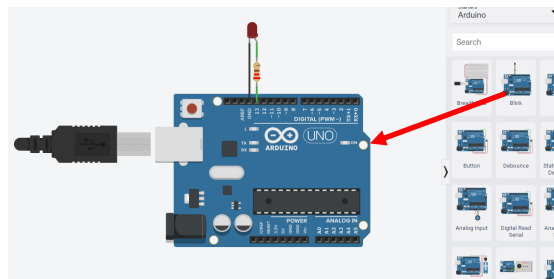
2— Go to Circuits.

3—Create a New Circuit.

4— Go to Components Basic

5—Go to Starters >Arduino.

6—Pull across the desired Uno Picture you desire ie Blink



7— Select Code, Blocks appear for Blink Sketch.

Try to see the simulation Run, change the waits and test.

8—Go to Blocks ▼

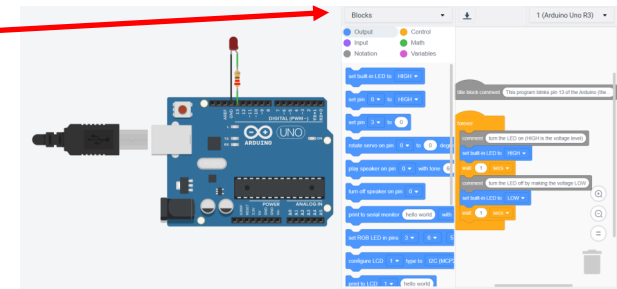
Select Blocks & Text.

EDIT MODE

Blocks

Blocks + Text

Text



title block comment This program blinks pin 13 of the Arduino (the...

```

1 // C++ code
2 //
3 /*
4  This program blinks pin 13 of the Arduino (the
5  built-in LED)
6  */
7
8 void setup()
9 {
10  pinMode(LED_BUILTIN, OUTPUT);
11 }
12
13 void loop()
14 {
15  // turn the LED on (HIGH is the voltage level)
16  digitalWrite(LED_BUILTIN, HIGH);
17  delay(1000); // Wait for 1000 millisecond(s)
18  // turn the LED off by making the voltage LOW
19  digitalWrite(LED_BUILTIN, LOW);
20  delay(1000); // Wait for 1000 millisecond(s)
21 }
    
```

Visual blocks for the code above: forever loop containing 'set built-in LED to HIGH', 'wait 1 secs', 'set built-in LED to LOW', and 'wait 1 secs'.

9—Highlight and Copy all the Text.

10—Paste the Text into the Arduino IDE, Rename it, then Upload to run the sketch on your Arduino.

