

## Το Arduino στην Πρωτοβάθμια & Δευτεροβάθμια Εκπαίδευση

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**ARDUINO**  
**DAY 2019**

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# Ορισμοί

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# Makey Makey



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# S4A

<https://www.csd.auth.gr/images/ekdiloseis/STEMART.pdf>

<http://s4a.cat>



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# Scratch for Arduino S4A - II

- Comparison of a simple program that blinks a LED connected to LED BUILTIN PIN # 13 on Arduino and in S4A

## Arduino Code

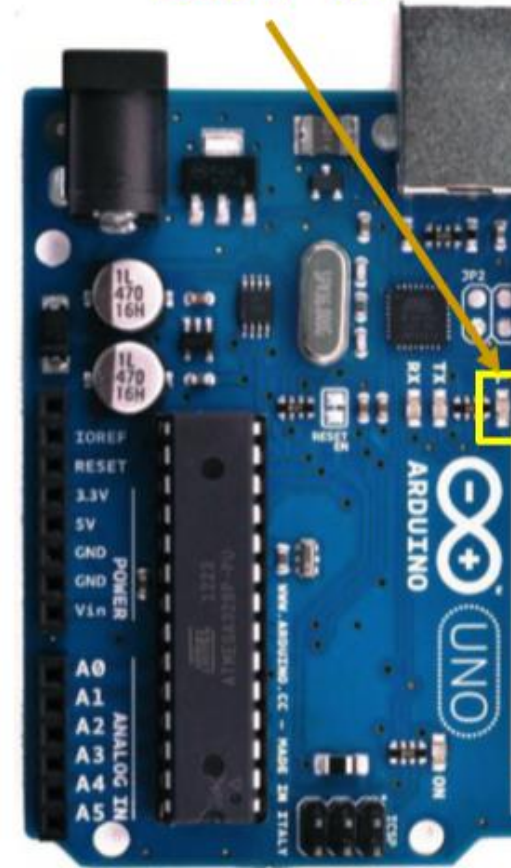
```
void setup() {
  // initialize digital pin LED_BUILTIN as an output.
  pinMode(LED_BUILTIN, OUTPUT);
}

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

## S4A Program

```
when clicked
forever
  if sensor Digital1 pressed?
    digital 13 on
  else
    digital 13 off
```

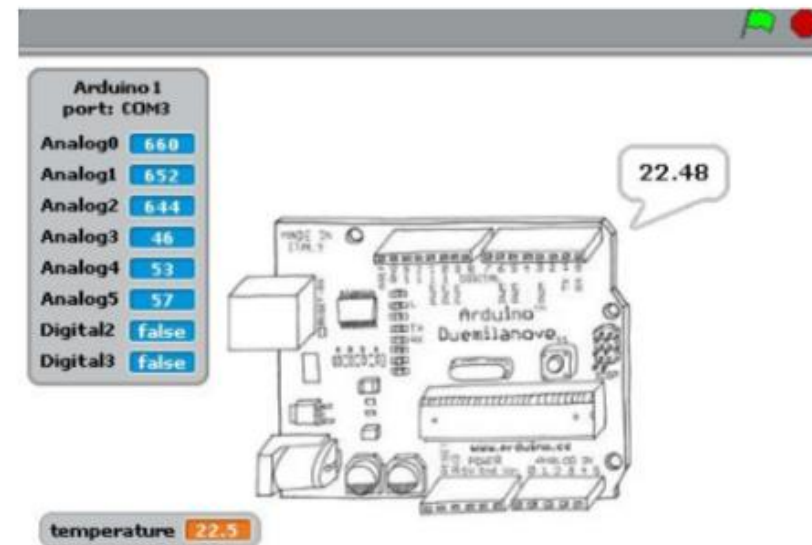
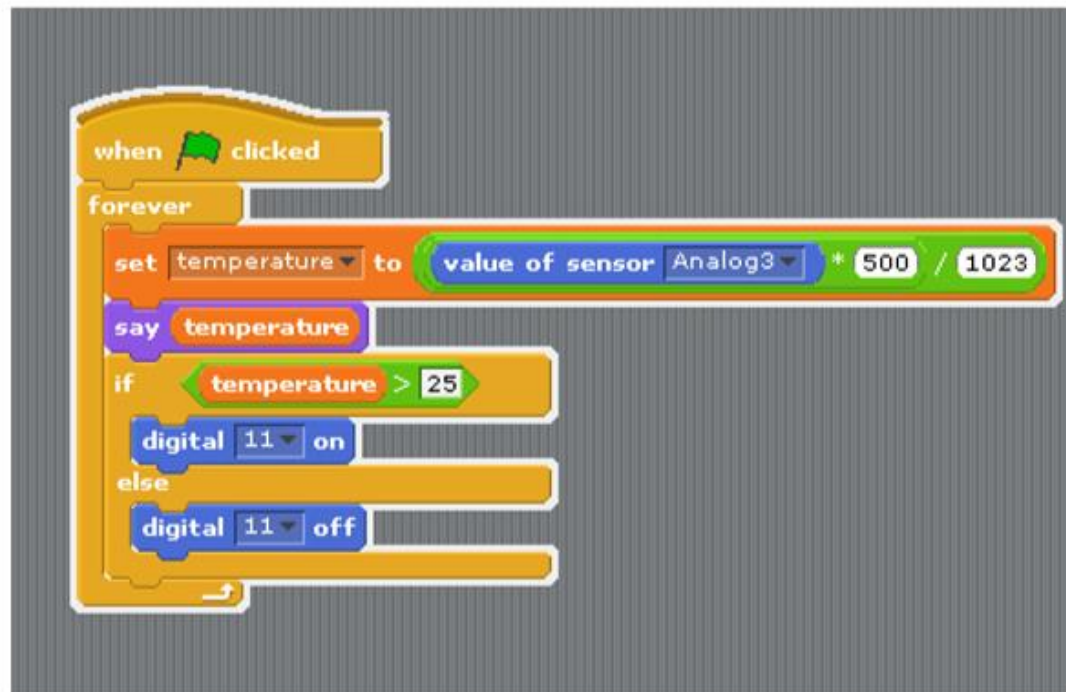
LED # 13



# Lab 3 - Temperature Alarm – (I)



- Final S4A program



# Theremin

<http://bit.ly/2Tz5Htq>

<http://bit.ly/2TDwCEn>



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# Gigo S4A

<http://bit.ly/2EeEn9w>



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# Καλές πρακτικές / ιδέες - projects

<http://bit.ly/2EeDRZ8> - mblock

<http://education.makeblock.com/mbot/>



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# Editors

[Web & desktop ... http://bit.ly/2TwYsIM](http://bit.ly/2TwYsIM)



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# Ardublock

<http://blog.ardublock.com/>



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# Makerbuino

<http://bit.ly/2TzfqzP>



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# Εκπαιδευτικοί “διαγωνισμοί”

ΕΛ/ΛΑΚ - <http://bit.ly/2EdfyL7>

WRO ? - <http://bit.ly/2EkTKxd>

Hydrobot - [http://hydrobots.gr/index/?page\\_id=4512](http://hydrobots.gr/index/?page_id=4512)

Aegean Robotics - <http://bit.ly/2E9AB0X>

& Φεστιβάλ Ψηφιακής Δημιουργίας (12/4/2019, Καστοριά)



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# Δράσεις στη Δυτική Μακεδονία



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# Ερευνητικές εργασίες



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# Ιδέες – ενδιαφέροντα βίντεο

<https://red.ht/2Ec1IbF> - Arduino projects



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# Προϊόντα - τιμές

<http://bit.ly/2EeEn9w> - Gigo S4A Programming Bricks

Eduardu - <http://bit.ly/2E9hHaD>

Mbot - <http://bit.ly/2E9QxjH>

**AlphaBot2 Robot Building kit for Arduino - <http://bit.ly/2EeOpHI>**

<http://bit.ly/2EkV8jp>

# Χρηματοδοτήσεις

Ίδρυμα Ευγενίδου - <https://hydrobots.gr/index/?cat=10>

ΕΛΛΑΚ

**Digifest!!!**



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# Arduino & Python

<http://bit.ly/2E8jgW3> - 20 μαθήματα



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# Arduino & Data (Learning) Analytics



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# MOOCs

<http://bit.ly/2Edcvm3> - εξαιρετικό δωρεάν σεμινάριο

<http://bit.ly/2V6YPRk> (edx)

<http://bit.ly/2E4kH7S> (Coursera)

<http://bit.ly/2EbmXuk> (Udemy)



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# Βιβλία

- <http://bit.ly/2E9CbQr> (βιβλία στα αγγλικά)
- <http://bit.ly/2EdkQWZ> (δωρεάν/ελληνική γλώσσα)
- <http://math.hws.edu/vaughn/cpsc/226/docs/askmanual.pdf>



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# Συνεργασίες & Take away



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