

## ΑΣΚΗΣΗ 2

1. Μελετήστε την δομή των προγραμμάτων του Arduino.
- 2.

```
int ledPin = 13; // LED connected to digital pin 13

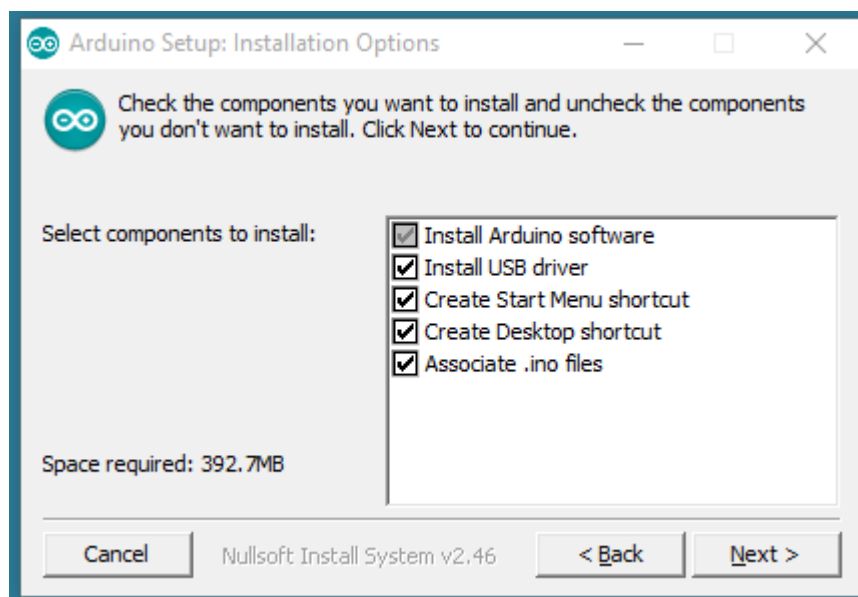
void setup() {
  pinMode(ledPin, OUTPUT); // sets the digital pin as output
}

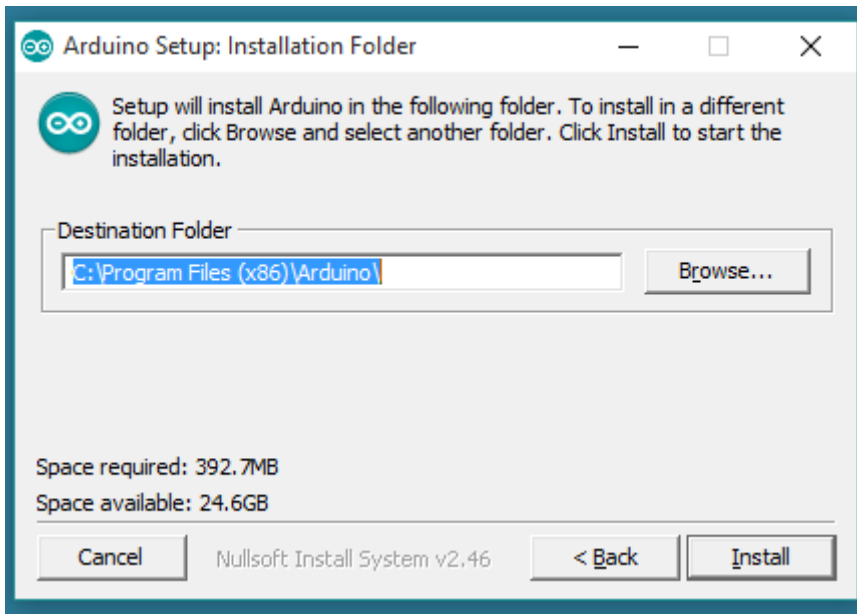
void loop() {
  digitalWrite(ledPin, HIGH); // sets the LED on
  delay(1000);                // waits for a second
  digitalWrite(ledPin, LOW);  // sets the LED off
  delay(1000);                // waits for a second
}
```

3. Συνδέστε το Arduino με το laptop και εγκαταστήστε το περιβάλλον ανάπτυξης του Arduino στο laptop.

Get the latest version from the download page. You can choose between the Installer (.exe) and the Zip packages. We suggest you use the first one that installs directly everything you need to use the Arduino Software (IDE), including the drivers.

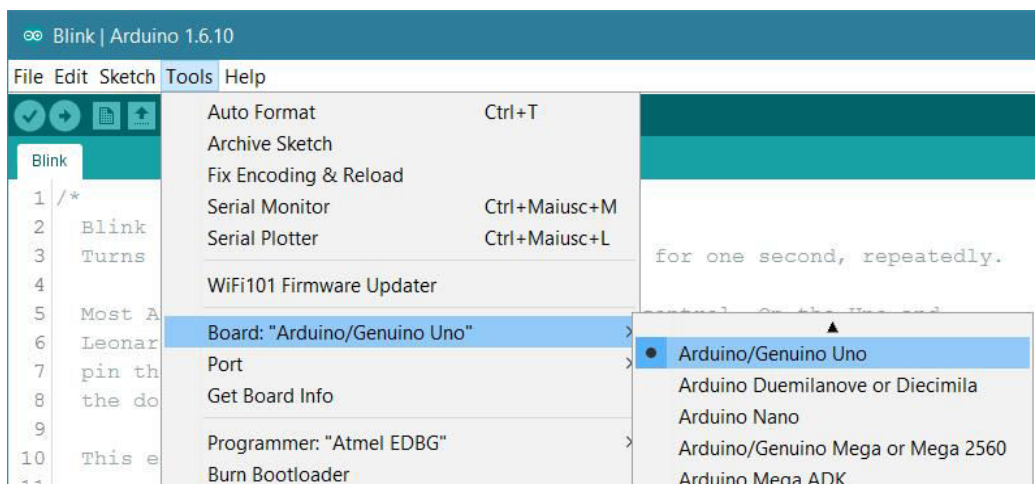
When the download finishes, proceed with the installation and please allow the driver installation process when you get a warning from the operating system.



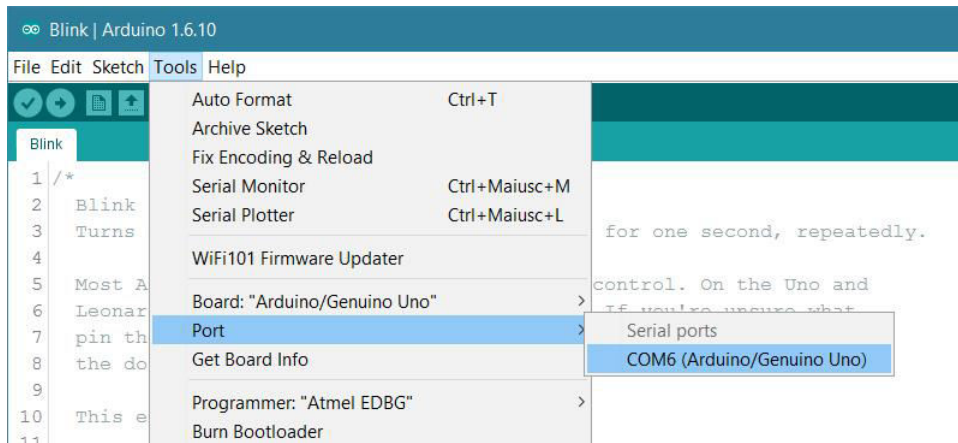


## Install the board drivers

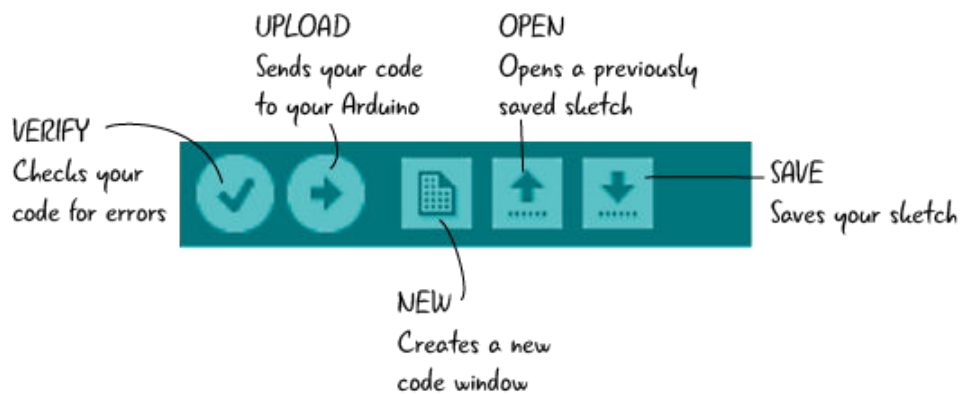
If you used the Installer, Windows - from XP up to 10 - will install drivers automatically as soon as you connect your board.



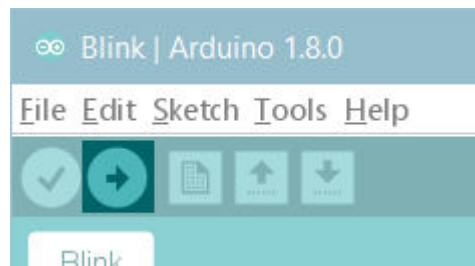
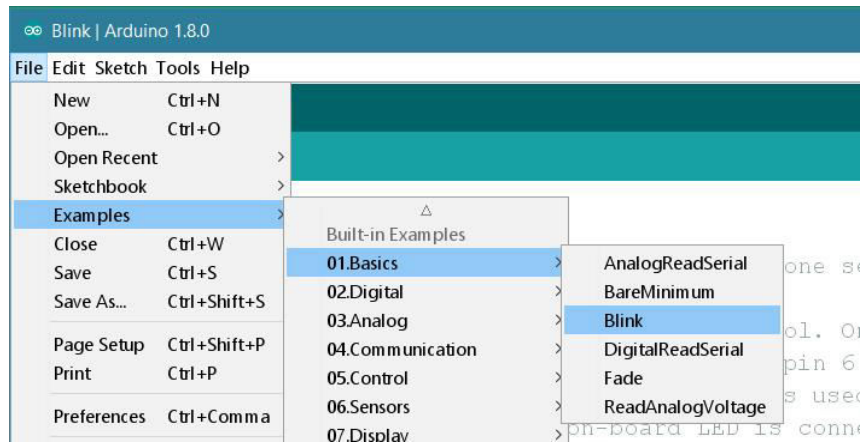
Select the serial device of the board from the Tools | Serial Port menu. This is likely to be **COM3** or higher (**COM1** and **COM2** are usually reserved for hardware serial ports). To find out, you can disconnect your board and re-open the menu; the entry that disappears should be the Arduino board. Reconnect the board and select that serial port.



4. Μελετήστε το menu του IDE.



2. Select and upload the program which blinks the LED on port 13.



5. Μελετήστε το πρόγραμμα αναβοσβήματος του LED

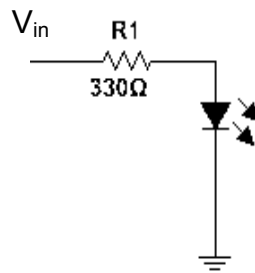
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void setup() {
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}

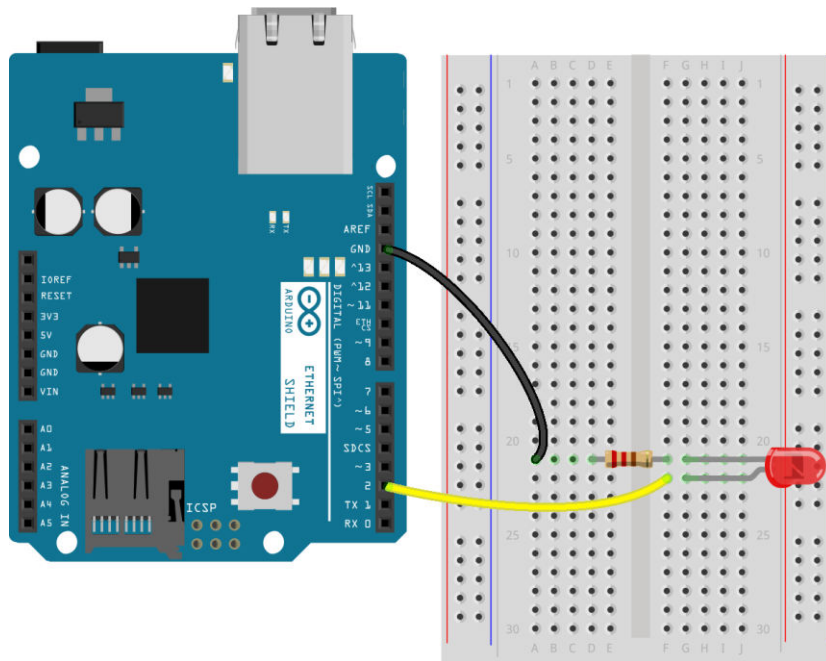
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  delay(1000); // waits for a second
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}
```

```
delay(1000);      // waits for a second
}
```

6. Τροποποιήστε το πρόγραμμα ώστε το LED να αναβοσβήνει πιο αργά.
7. Μελετήστε το πρόγραμμα ένδειξης των 0, 1 που δίδεται στην συνέχεια.



8. Συνδέστε ένα εξωτερικό LED σε μία πόρτα του Arduino. Τροποποίησε το LED ώστε να αναβοσβήνει το εξωτερικό LED.



- 9.

