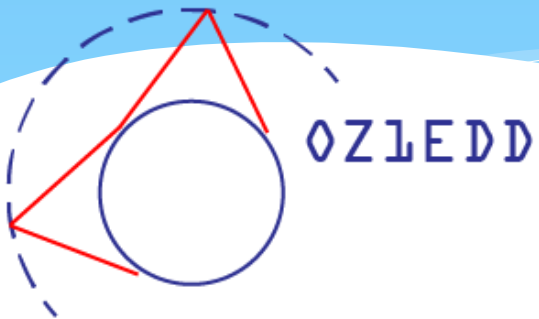




Arduino Basis

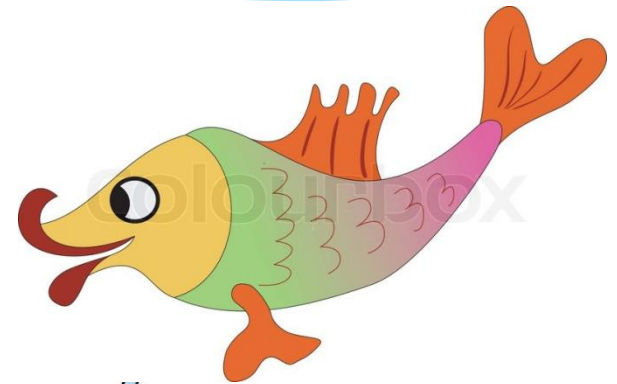
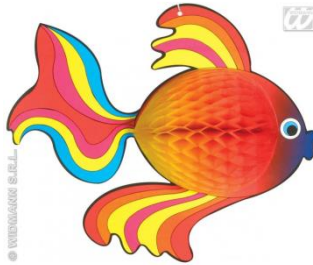
19. november 2015



Helt basis – 2 ting

1. Hvad er Arduino for en fisk?
2. Start programmering

Hvad for en fisk?



Open Source

- * Software må kopieres og ændres
- * Hardware må kopieres og ændres
- * Egen udvikling stilles til rådighed tilsvarende

It's a bit like the Sniffin' Glue fanzine shown here:

During the punk era, knowing three chords on a guitar was enough to start a band. Don't let the experts in one field tell you that you'll never be one of them.

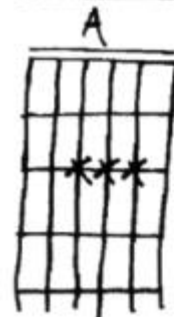
Ignore them and surprise them.

SNIFFIN' GLUE.. + OTHER ROCK 'N' ROLL HABITS FOR PUNKS! ①

NO. 1 OF MANY, WE HOPES!

THIS THING IS NOT MEANT TO BE READ...IT'S FOR SOAKING IN GLUE AND SNIFFIN'.

PLAY'IN IN THE BAND...FIRST AND LAST IN A SERIES.....



THIS IS A CHORD



THIS IS ANOTHER



THIS IS A THIRD

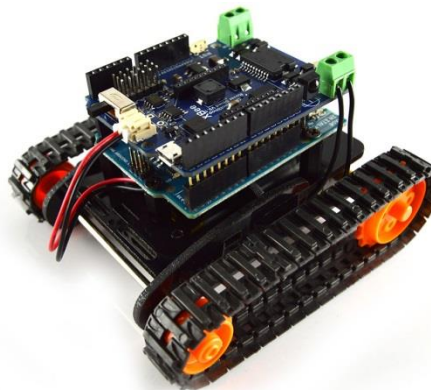
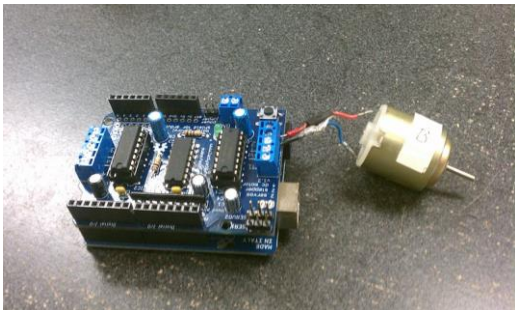
NOW FORM A BAND

Miljøet



- * Arduino board
 - * [Arduino UNO](#) er et godt sted at starte (Starter Kit)
 - * Breadboard
- * Arduino IDE (Integrated Development Environment)
 - * Programmeringsmiljøet
- * <https://www.arduino.cc/>
 - * Arduino verdenens navle

Miljøet



Køb Arduino

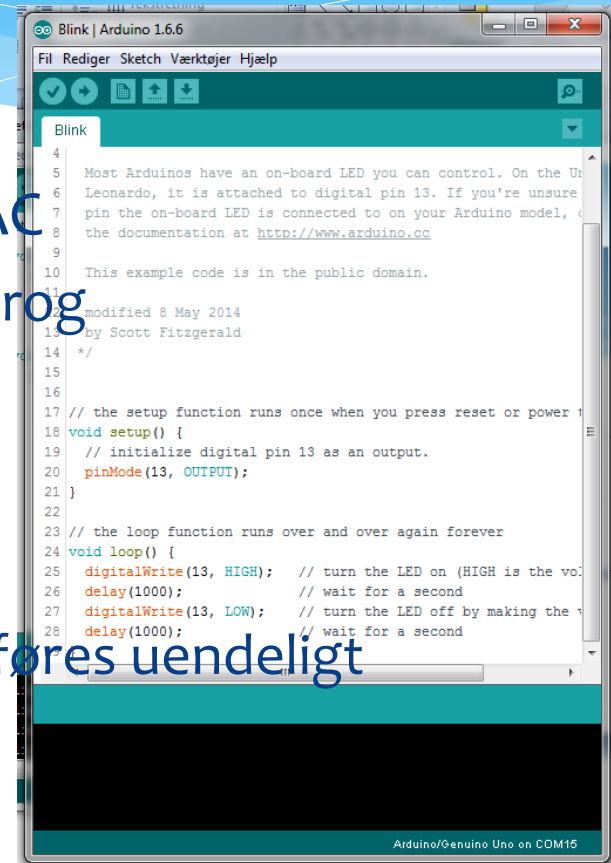
- * Google søg:
 - * "buy arduino" -> 7.840.000
 - * "køb arduino" -> 50.5000
- * EU køb – som i Danmark
- * Ikke EU køb:
 - * < 80kr = ingen moms, ingen told, intet gebyr
 - * < 1.150kr = moms, ingen told, gebyr
 - * > 1.150kr = moms, told, gebyr



Making a Sketch

Et Arduino program

1. Sketchen skrives i IDE på en PC/MAC
 - * C++ i et forståeligt og struktureret sprog
2. Compilering
 - * Oversættelse til maskinkode til chip
3. Overføres til Arduino
 - * Udførelsen starter automatisk og udføres uendeligt



The screenshot shows the Arduino IDE interface with the 'Blink' sketch loaded. The code is as follows:

```
4
5 Most Arduinos have an on-board LED you can control. On the Un
6 Leonardo, it is attached to digital pin 13. If you're unsure
7 pin the on-board LED is connected to on your Arduino model,
8 the documentation at http://www.arduino.cc
9
10 This example code is in the public domain.
11
12 // modified 8 May 2014
13 // by Scott Fitzgerald
14 */
15
16
17 // the setup function runs once when you press reset or power
18 void setup() {
19   // initialize digital pin 13 as an output.
20   pinMode(13, OUTPUT);
21 }
22
23 // the loop function runs over and over again forever
24 void loop() {
25   digitalWrite(13, HIGH); // turn the LED on (HIGH is the vol
26   delay(1000); // wait for a second
27   digitalWrite(13, LOW); // turn the LED off by making the v
28   delay(1000); // wait for a second
29 }
```

At the bottom of the IDE window, it says 'Arduino/Genuino Uno on COM15'.

Sketch struktur

Den simpleste

1. `void setup() {`
2. `// put your setup code here, to run once`
3. `}`

4. `void loop() {`
5. `// put your main code here, to run repeatedly`
6. `}`



Sketch struktur

Den simpleste med kode

1. `void setup() {`
2. `pinMode(13, OUTPUT);`
3. `}`

4. `void loop() {`
5. `digitalWrite(13, HIGH);`
6. `delay(1000);`
7. `digitalWrite(13, LOW);`
8. `delay(1000);`
9. `}`

