Linux Day 2014

AUG Grande Community

October 25, 2014

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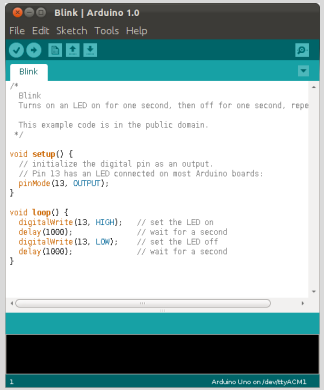
Officine Arduino / Fablab Torino
Via Egeo, 16

Cos’è Arduino?!

Arduino is a tool for making computers that can sense and control more of the **physical world** than your desktop computer.

It's an **open-source** physical computing platform based on a simple microcontroller board, and a development environment for writing software for the board.

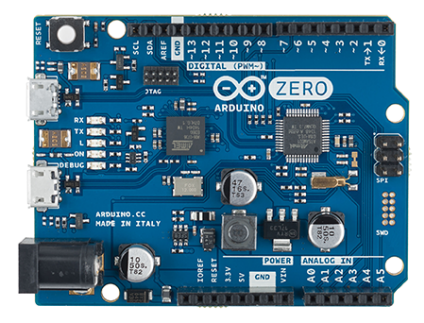
Arduino can be used to develop **interactive objects**, taking inputs from a variety of switches or sensors, and controlling a variety of lights, motors, and other physical outputs.



ARDUINO
OPEN-SOURCE
COMMUNITY

http://arduino.cc/en/Guide/HomePage

Adesso

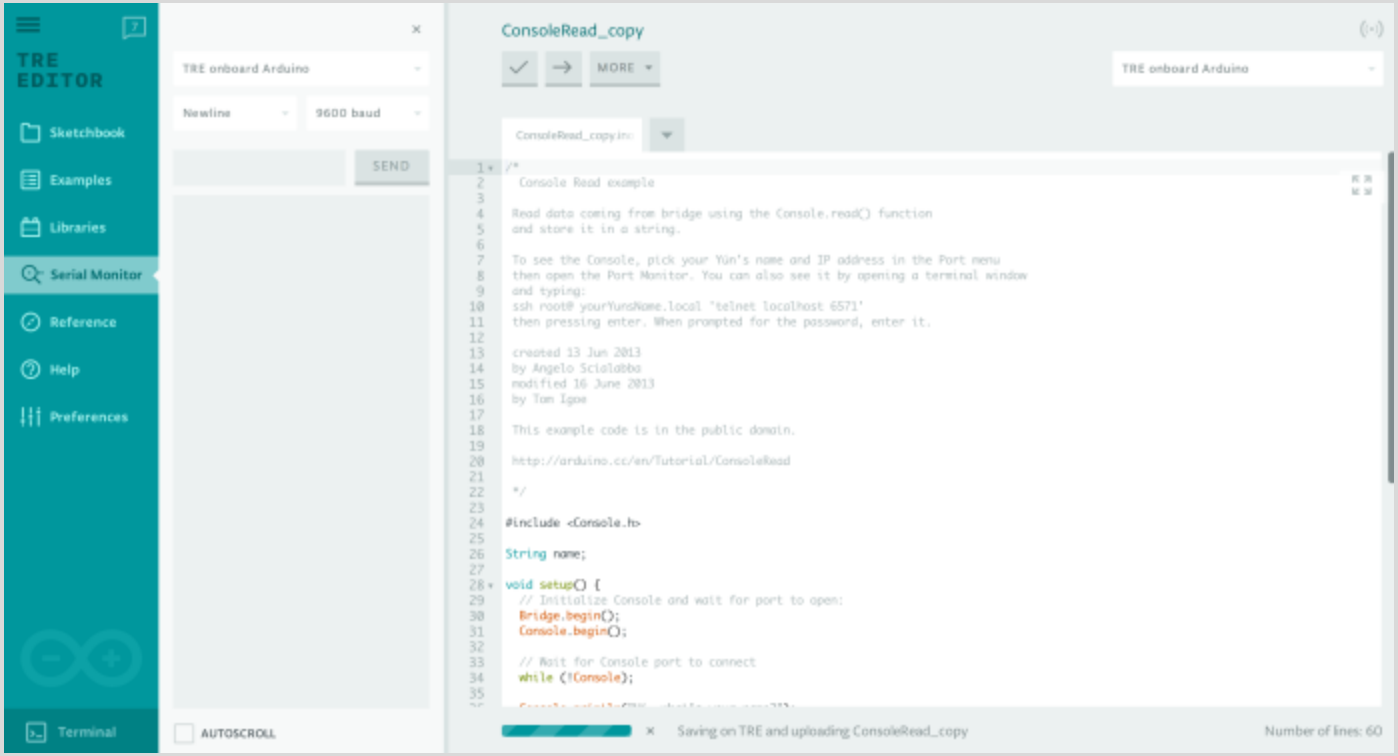


Arduino Zero

Arduino TRE

Materia 101

Adesso



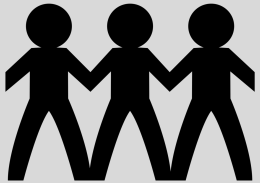
Arduino Web IDE

Dove

Spazi

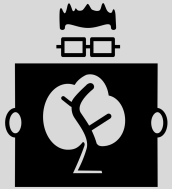
Azienda
Fablab
Makerspace
Corsi
Arduino User Group

Persone



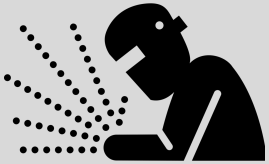
molti utenti

Inesperto



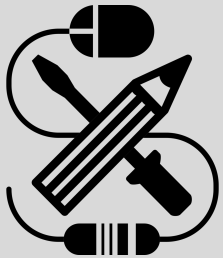
Designer
Architetto

Maker

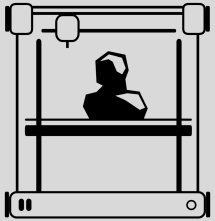


Guru

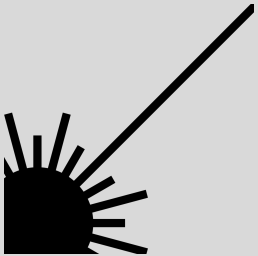
Macchine



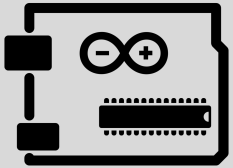
Tools



3D printer

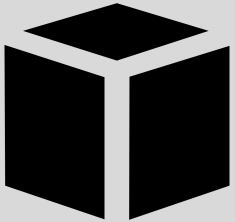


Lasercut



Arduino

Ritrovo makers



Progetti - Idee

Fablab Tools

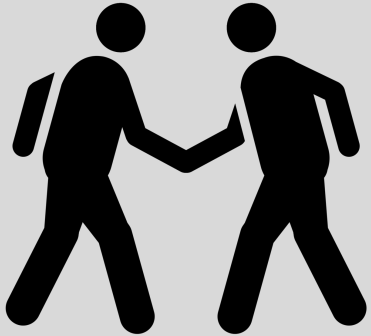
Necessità

- Dare la possibilità agli utenti di **accedere al Fablab**
- Abilitare l'**utilizzo dei macchinari** solo a chi ha frequentato il corso di formazione
- Gestire il **prestito di attrezzatura**
- Automatizzare il sistema di pagamento tramite **crediti**

Associare il profilo utente ad un sistema di controllo basato su badge RFID

Come funziona?

Iscrizione e creazione profilo online



formalizzazione iscrizione. Prime istruzioni

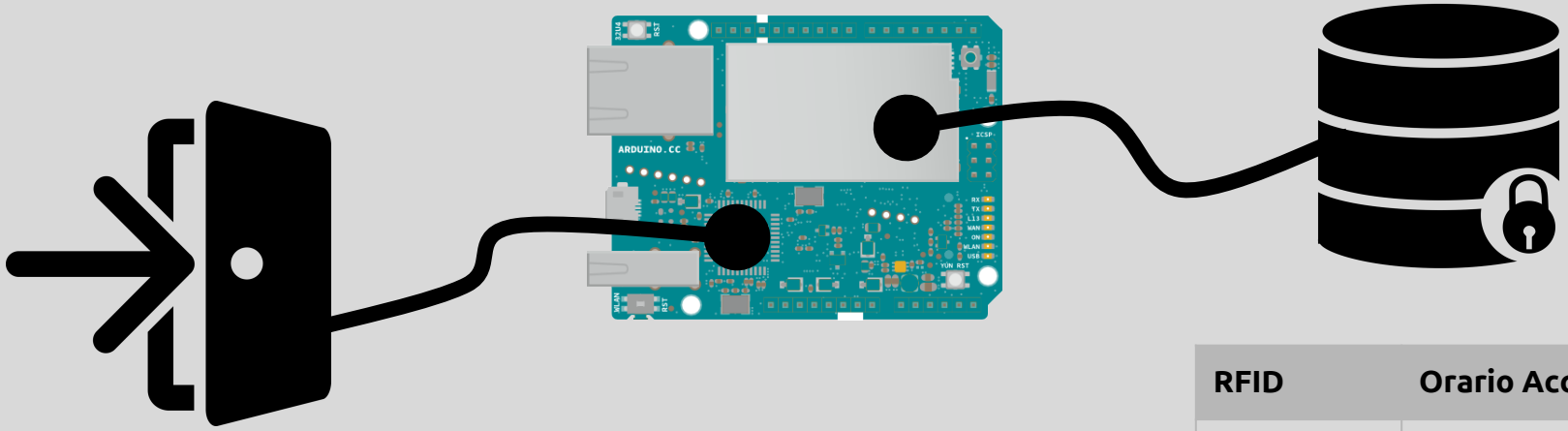
Tessera personale RFID

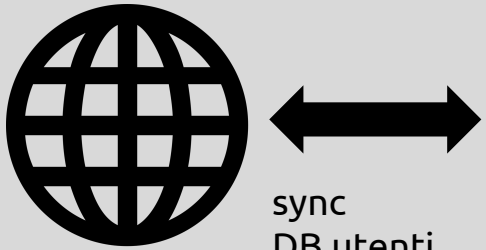
Profilo Utente

Foto

Nome	Benvenuto
Cognome	Buonuomo
Crediti	250
RFID	D34DB33F
Orario Accesso	16:00 - 20:00
Lasercutter	Yes
Fresa CNC	No
Armadio Strumenti	No
Prenotazione macchine	Lasercut: Mon 17:00 - 17:30

Porta del Fablab



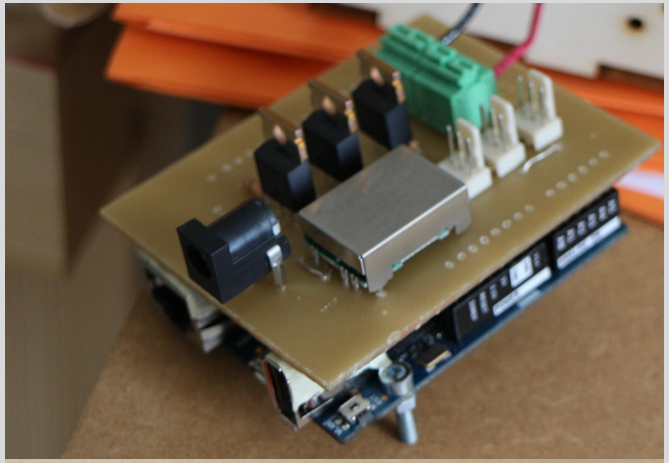


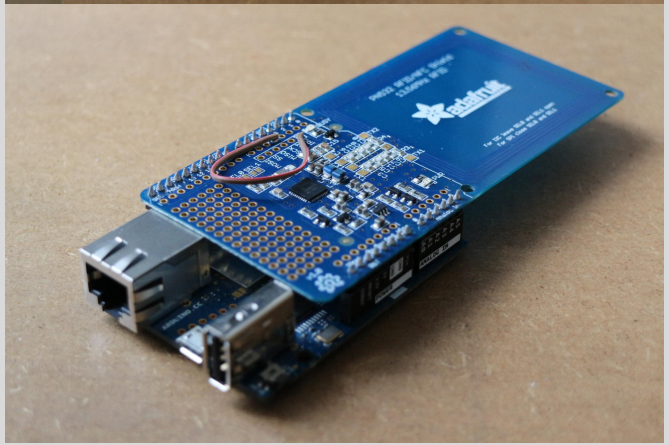
sync
DB utenti

RFID	Orario Accesso
D34DB33F	16:00 - 20:00
12A46FF33	15:00 - 23:00
F3D3722CC	12:00 - 24:00
16C34AB12	16:00 - 18:00

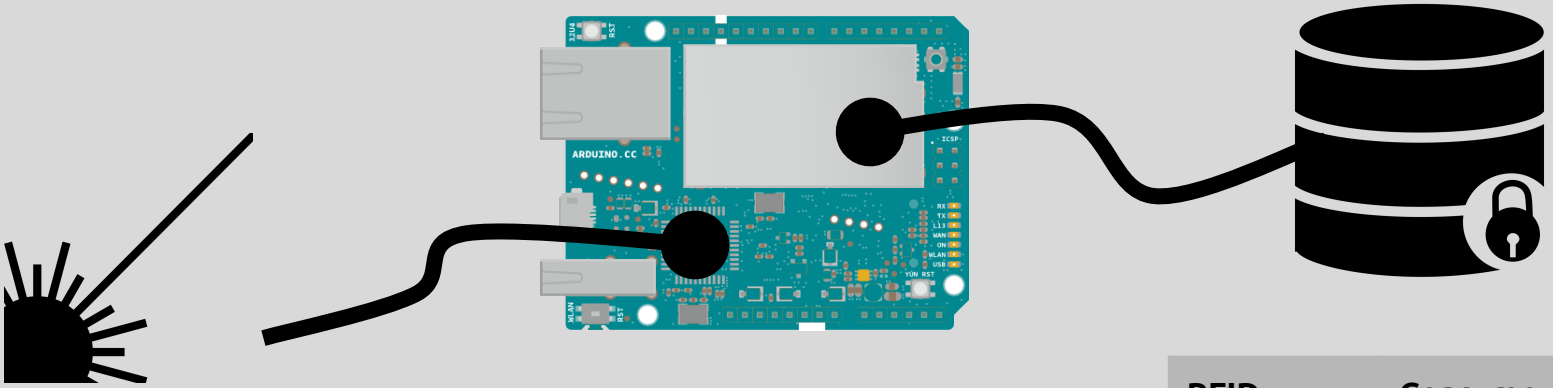
Codice Open Source
https://github.com/FablabTorino/FablabDoorman

Porta del Fablab

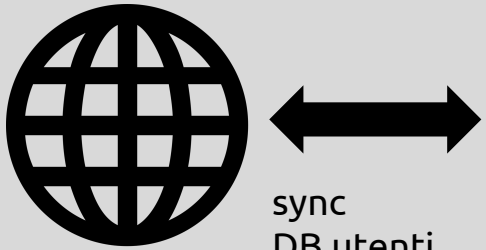




Porta del Fablab



Lasercut

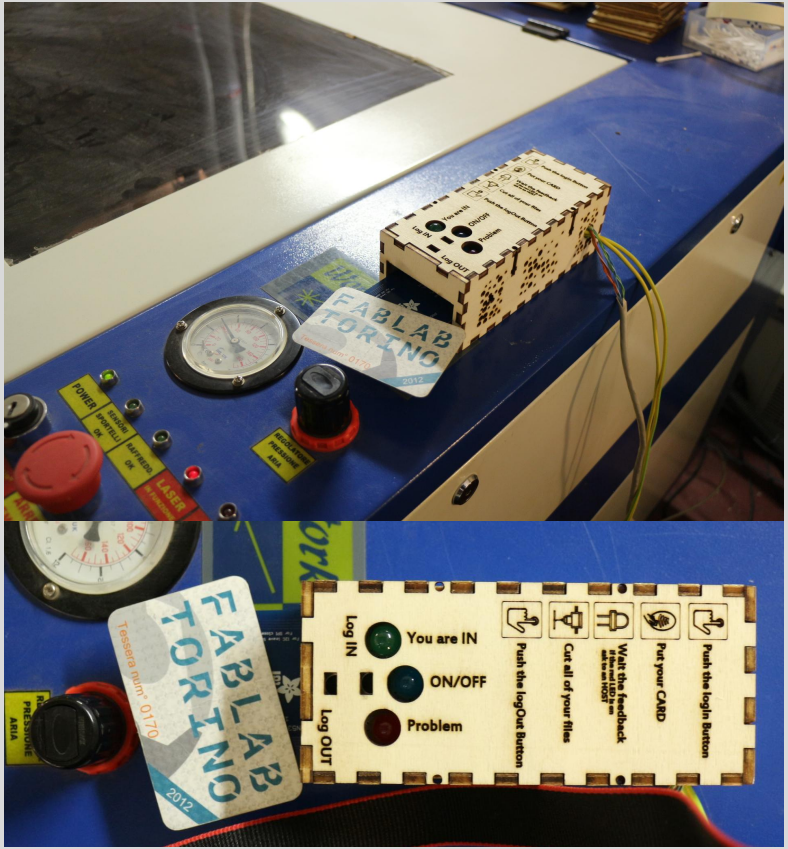


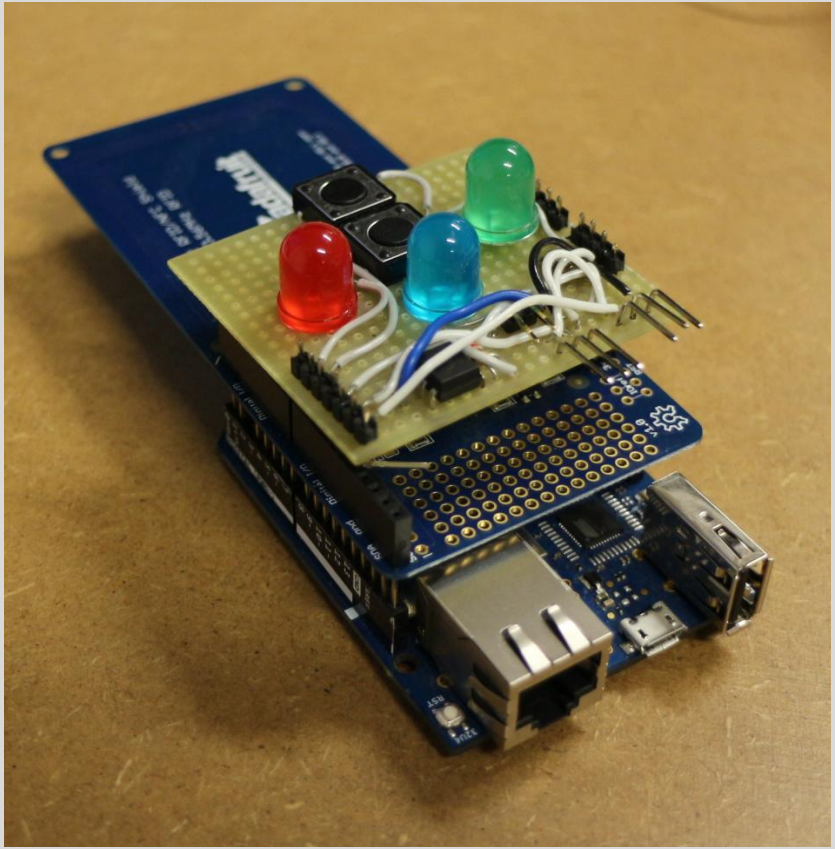
sync
DB utenti

RFID	Consumo Crediti
D34DB33F	30
12A46FF33	65
F3D3722CC	70
16C34AB12	15

Codice Open Source
https://github.com/FablabTorino

Utilizzo Lasercut





Arduino User Group

ARDUINO
USER GROUP
TORINO

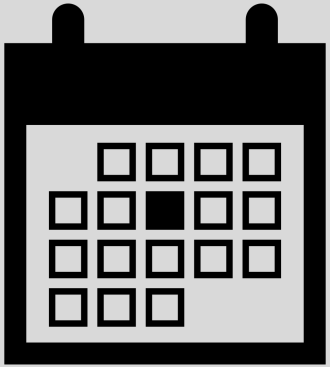
Chi? Quando?

Curiosi

Softwaristi che vogliono imparare l’elettronica

Hardwaristi che vogliono imparare a programmare

Chi ha un progetto e vuole condividerlo

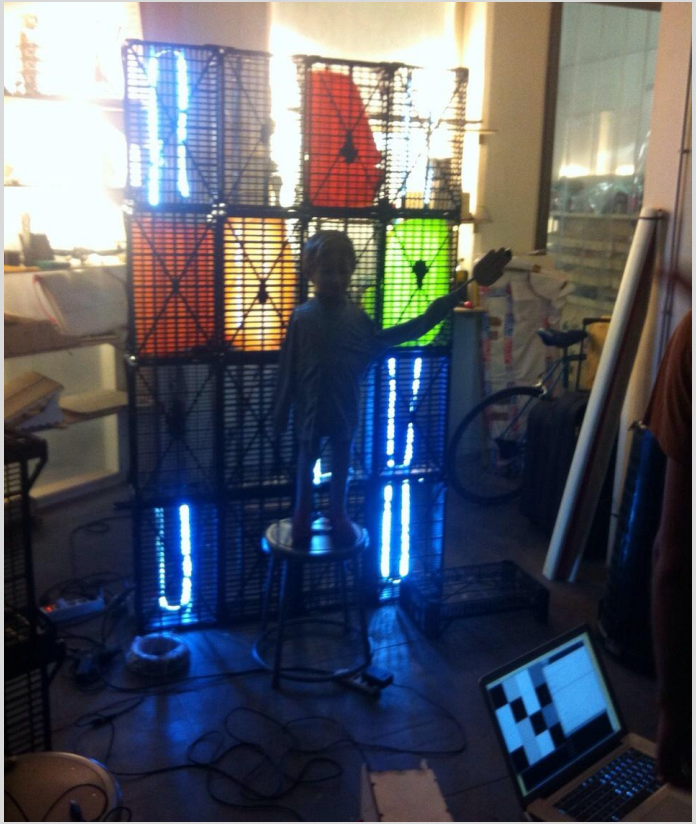


Ogni secondo e quarto Mercoledì del mese

dalle 19:00

(Fablab Torino - Via Egeo, 16)

Fruit Loop



E’ un sequencer audio con interfaccia capacitiva (frutta e verdura).

Una matrice di led 4x4 realizzata con delle cassette della frutta.

4 campioni audio da suonare

https://github.com/FablabTorino/fruitloop

Light Guitar

Un’immagine viene mostrata per colonne di pixel su una LED strip RGB. Solo una foto a lunga esposizione rivela l’immagine completa.

Mood lamp connessa

Lampada RGB che produce una luce ambientale influenzata dai sensori che ha a bordo e da quello che succede su “Internet”:

- situazione traffico
- andamento borsa
- meteo
- social networks
- remote control

Wearable

prototipo di un costume per danza.

Le LED strip applicate generano colori in base ai movimenti della danzatrice.

autore: Davide Gomba

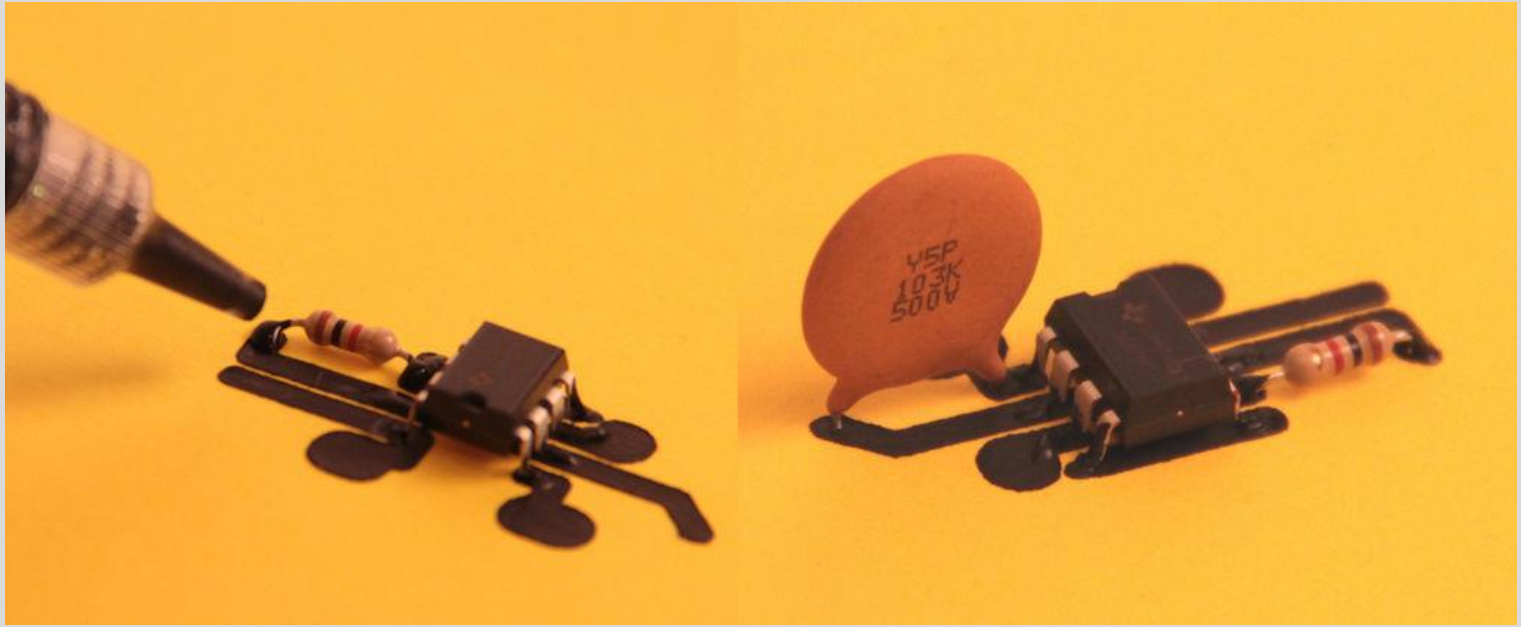
Tiny Matrix

E’ un ciondolo con un microcontrollore e una matrice di led in grado di mostrare diverse immagini o animazioni.

Tecnica di saldatura “dead bug”

https://sites.google.com/site/tinymatrix/

Drawable Circuits



Inchiostri conduttivi, nastri adesivi che conducono solo in una direzione, componenti SMD.

Pochi strumenti ed economici, non serve saldare, basta la carta