

L'ELETTRONICA SEMPLICE CON ARDUINO

ANDREA
SOTTOCORNOLA

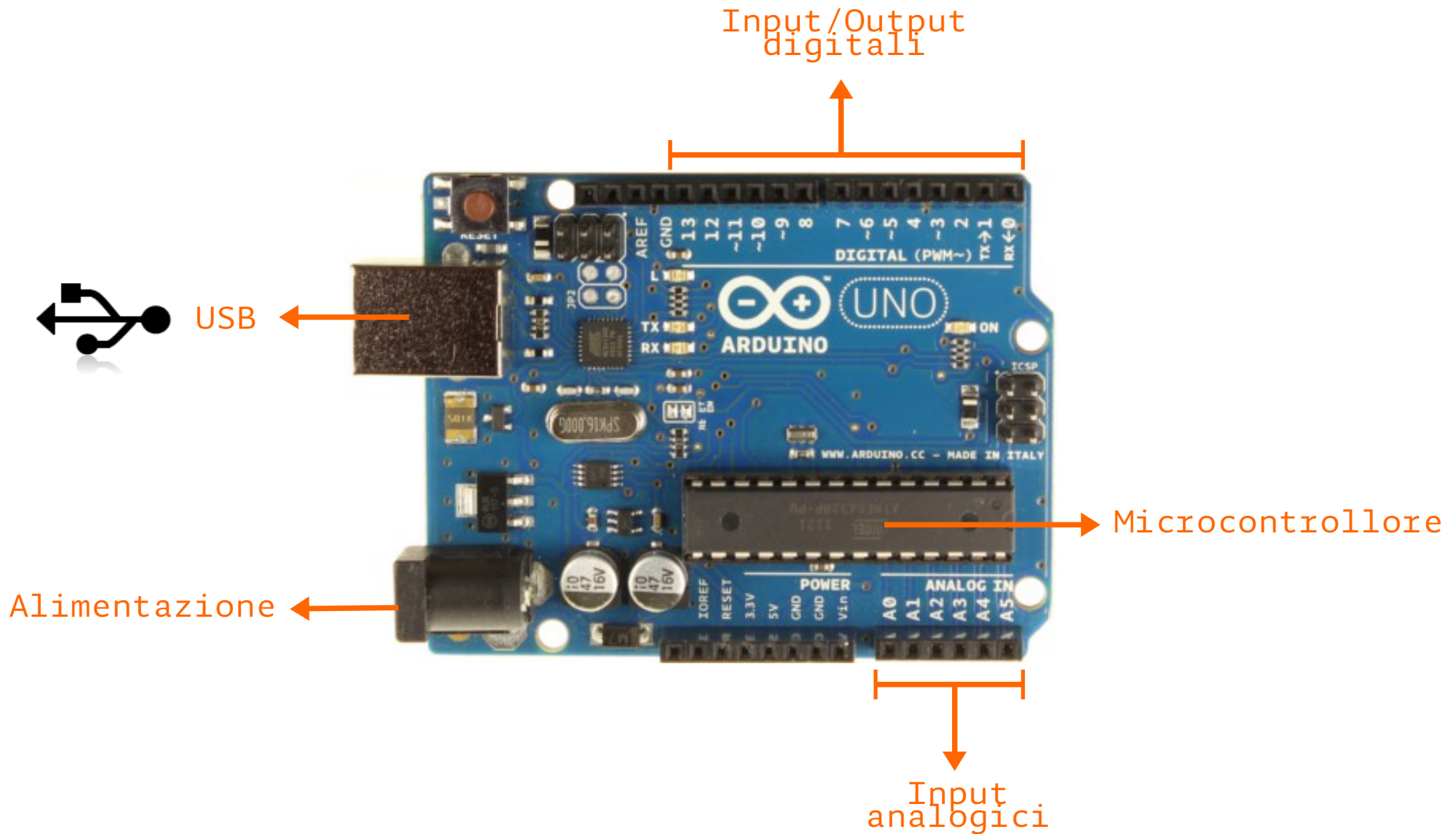


MAKERS LAB

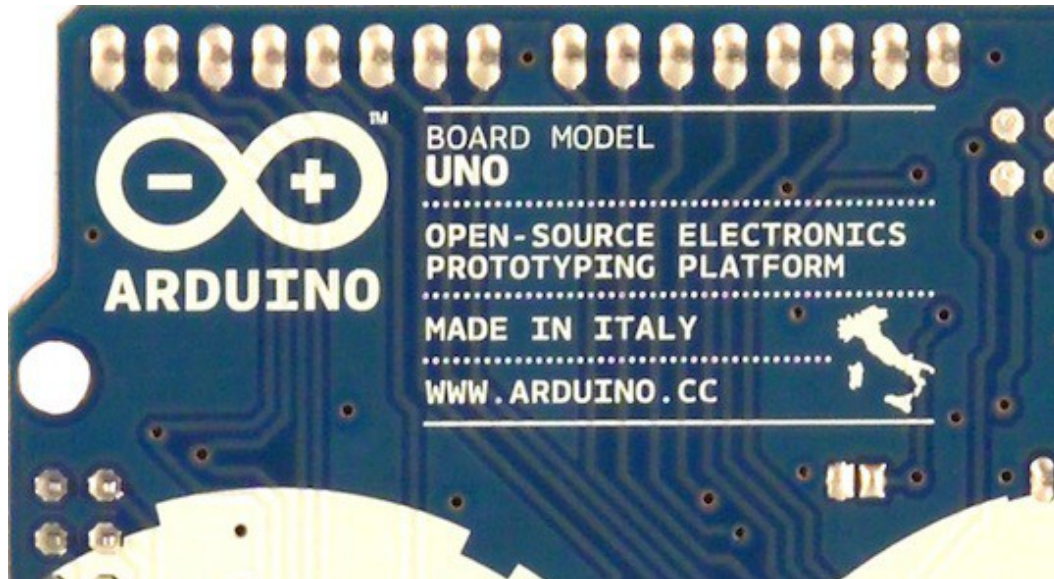


Making = Being human

ARDUINO



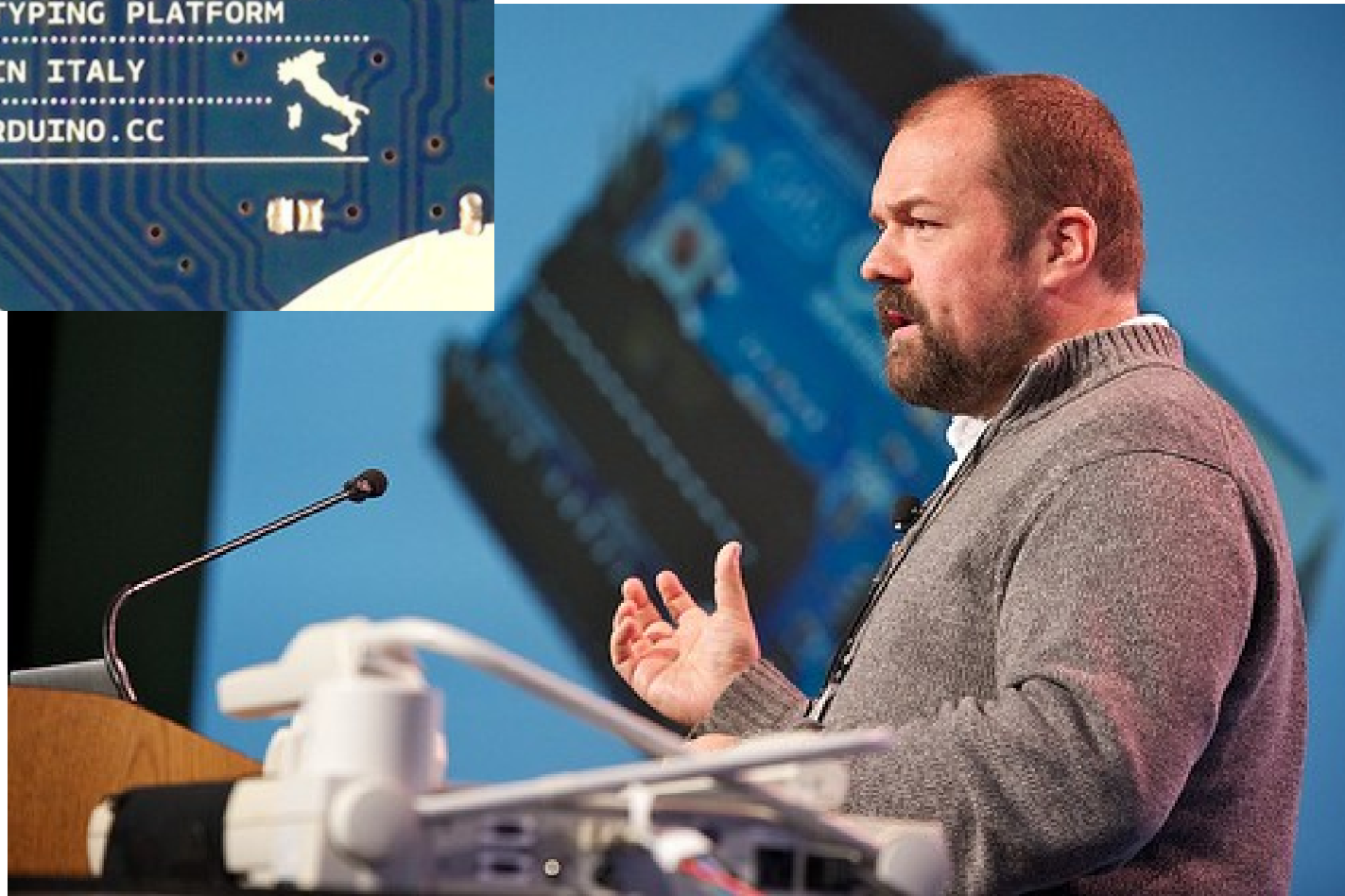
IL PAPA' DI ARDUINO



MASSIMO
BANZI



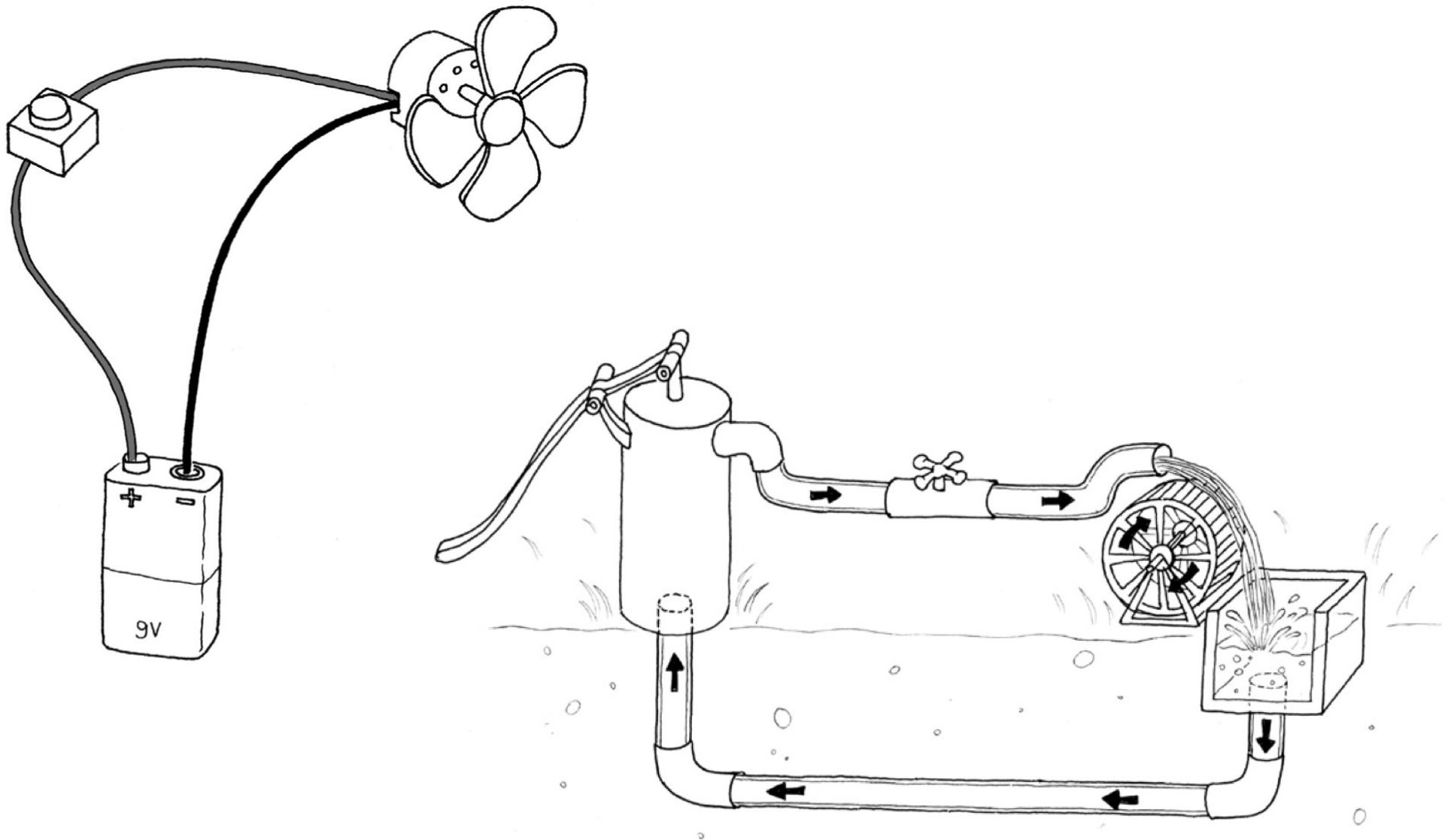
OFFICINE
ARDUINO



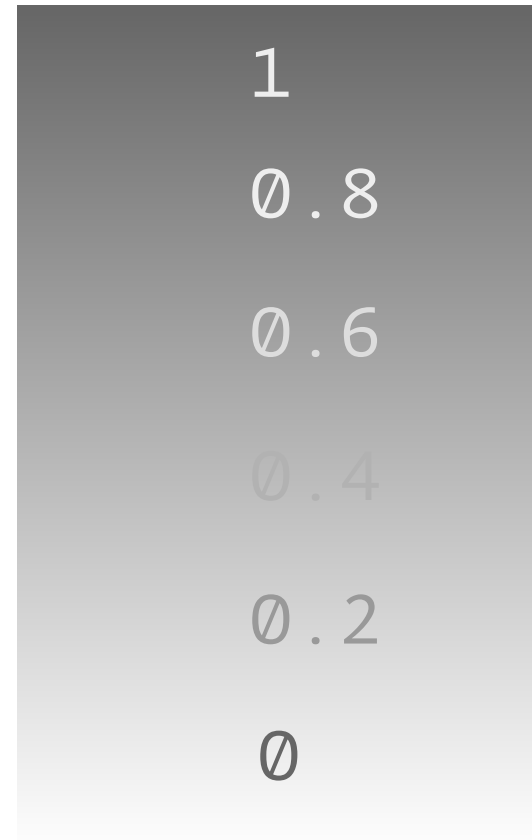
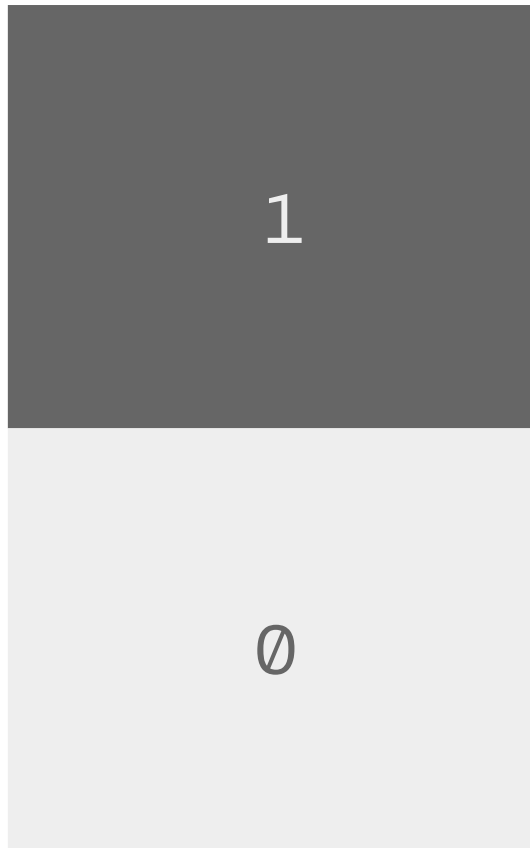


GIUSTO UN PO' DI
ELETTRONICA

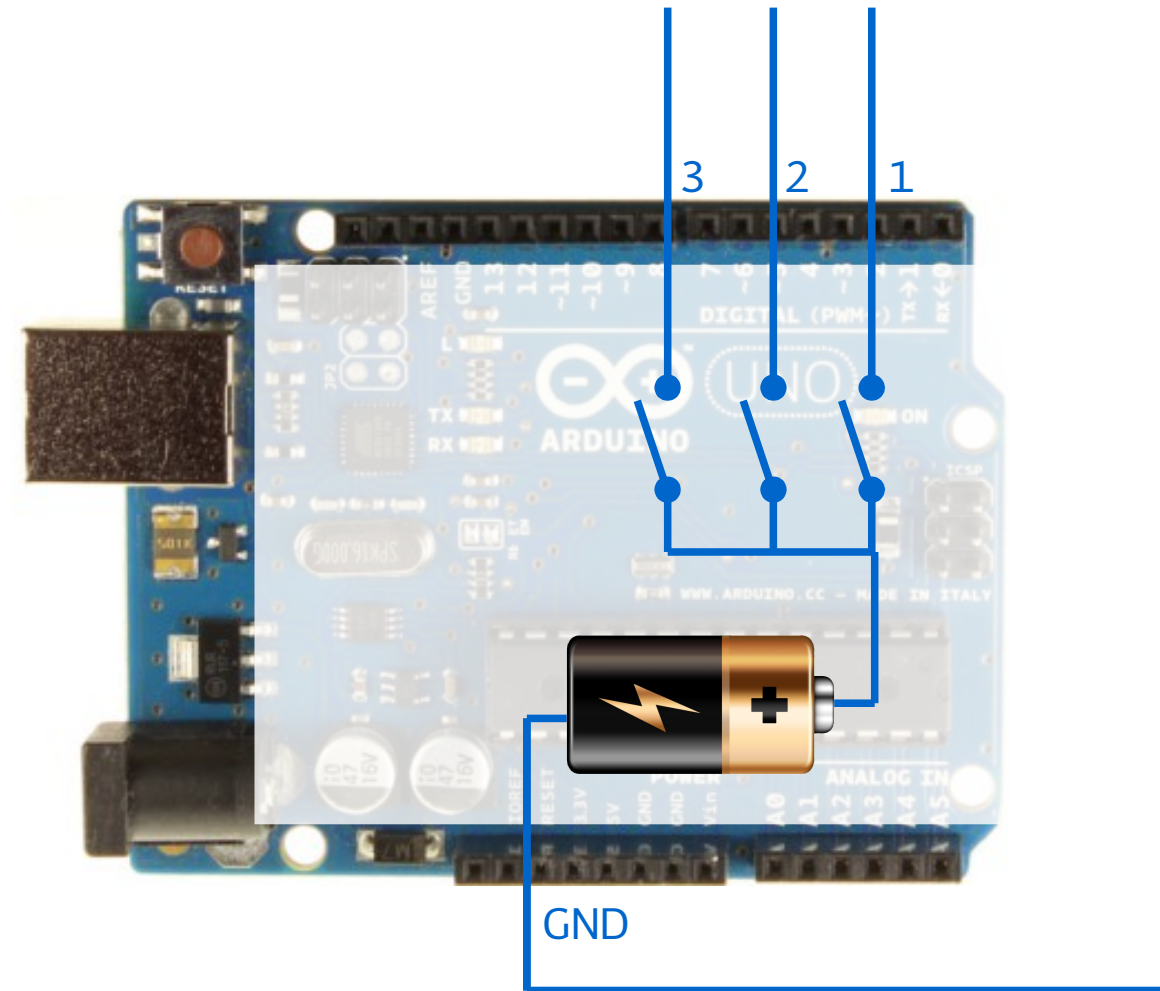
ELETTRONI CHE SI MUOVONO



DIGITALE VS ANALOGICO



IL PIN



QUALCHE RICETTA DI INFORMATICA

COME UNA RICETTA

MISO SOUP WITH TOFU & WAKAME 	EVERY FAMILY IN JAPAN HAS THEIR OWN FAMILY-RECIPE, FROM TYPE OF BROTH, TYPE OF MISO, TO TYPE OF TOPPINGS. 	INGREDIENTS FOR 2 SERVINGS 2 cups Dashi * 1/4 block Tofu (medium firm) 2 tbsp Miso (Awase-miso) 1 tsp cut Wakame (seaweed) 1 tsp chopped Negi (onion) *Dashi: Use Ichiban-Dashi for a light soup, Nishiohi Dashi for a robust soup.
STEP 1: CUT TOFU INTO SMALL DICES.	STEP 2: SOAK WAKAME IN WATER FOR 4-5 MIN. REMOVE AND SQUEEZE OUT WATER.	IF USING UNCLUT WAKAME, THEN CUT INTO 1/2 INCH PIECES.
		
STEP 3: HEAT DASHI TO NEAR-BOIL. DUMP IN TOFU AND RE-HEAT TO BOIL.	STEP 4: REMOVE POT FROM STOVE, THEN SLOWLY MIX IN MISO UNTIL DISSOLVED.	STEP 5: ADD WAKAME & NEGI AND REHEAT. REMOVE RIGHT BEFORE BOILING, AND SERVE.
		DO NOT LET SOUP BOIL !! Destroys Miso's aroma! 

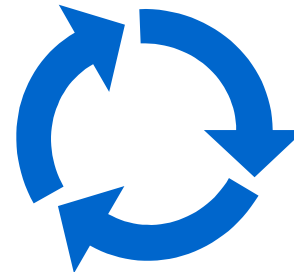
L ' INFORMATICA DI ARDUINO

```
//Commento
```

```
int i;
```

```
void setup()  
{  
    i = 5;  
}
```

```
void loop()  
{  
    i = i + 2;  
}
```



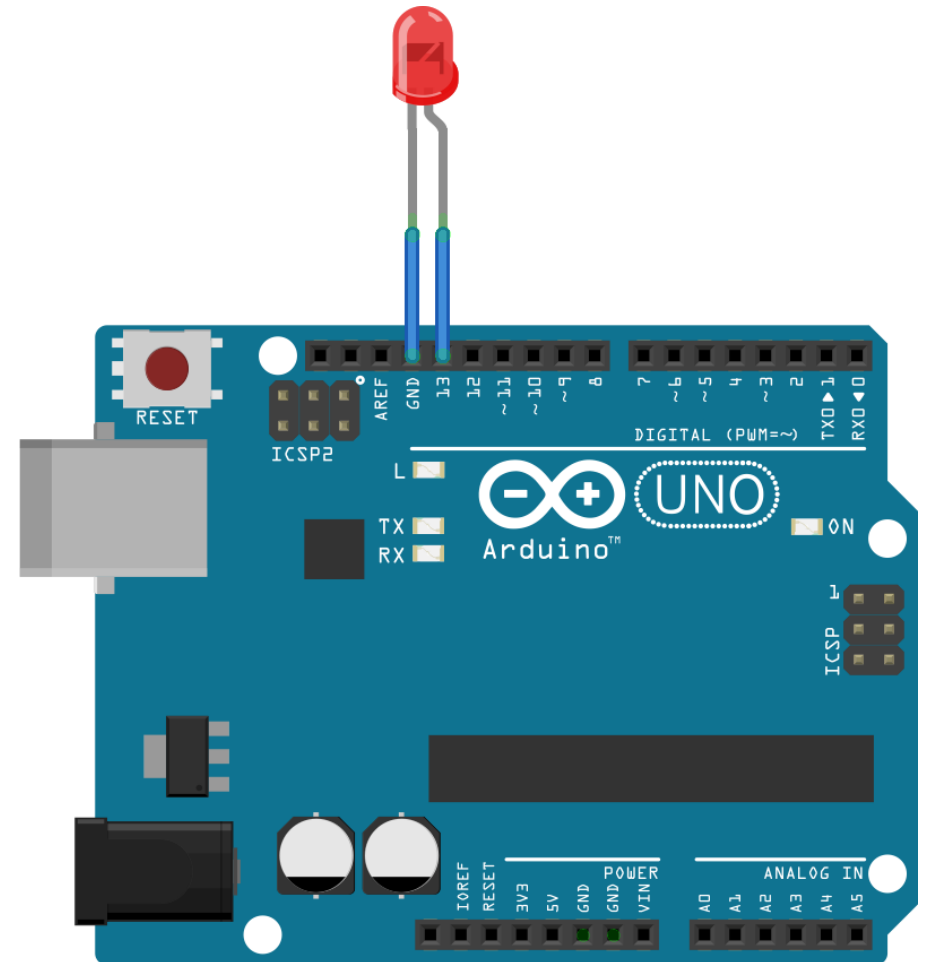
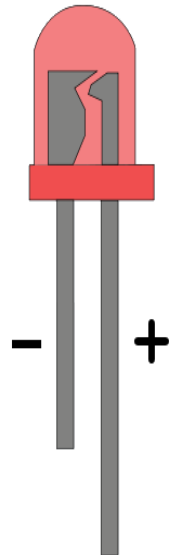
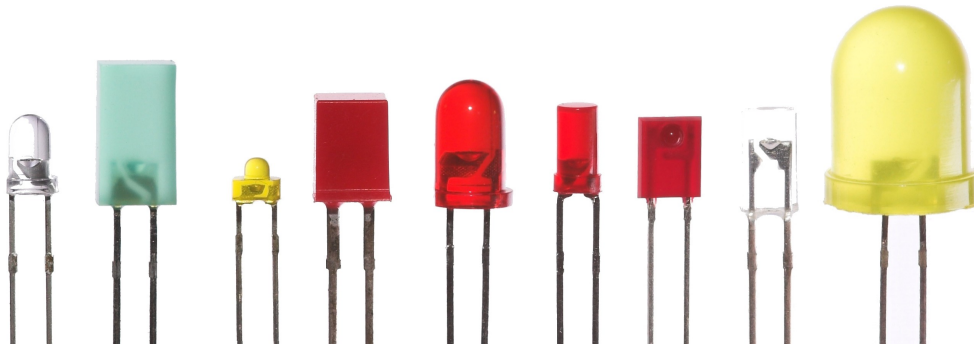
*"Talk is cheap,
Show me the code."*

Linus Torvalds

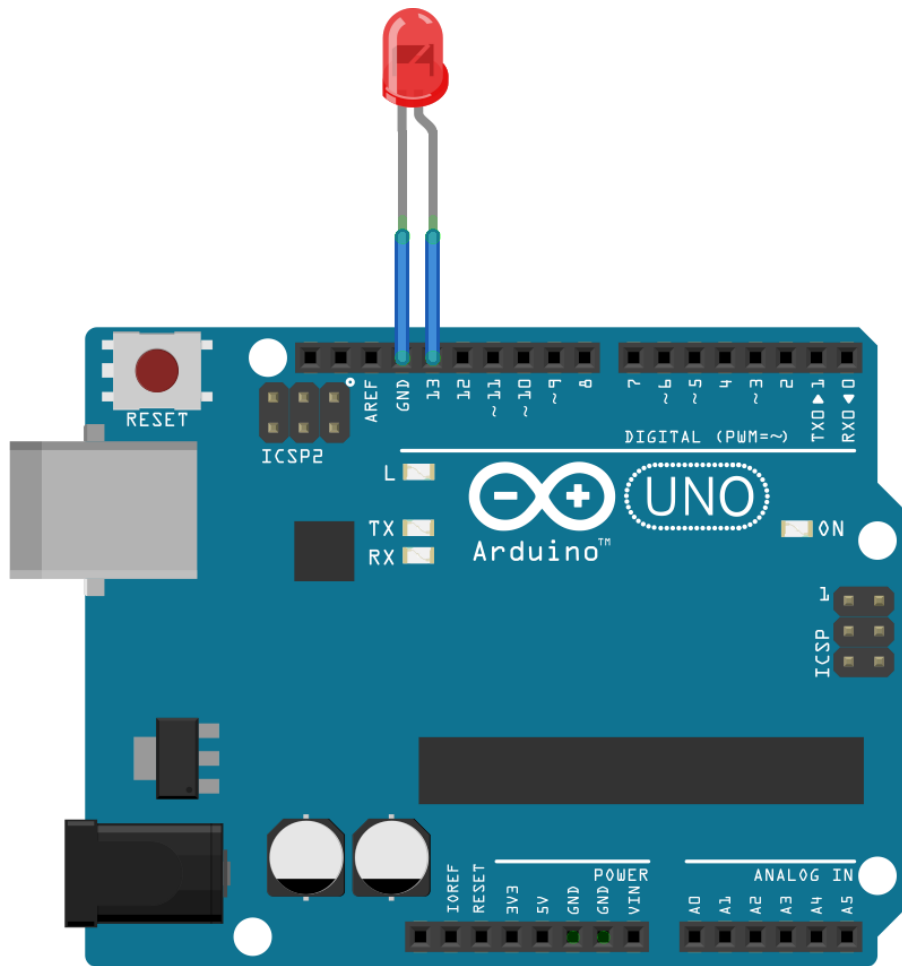
E FINALMENTE UN PO' DI
ESEMPI



0. COLLEGARE UN LED



1. ACCENDERE UN LED



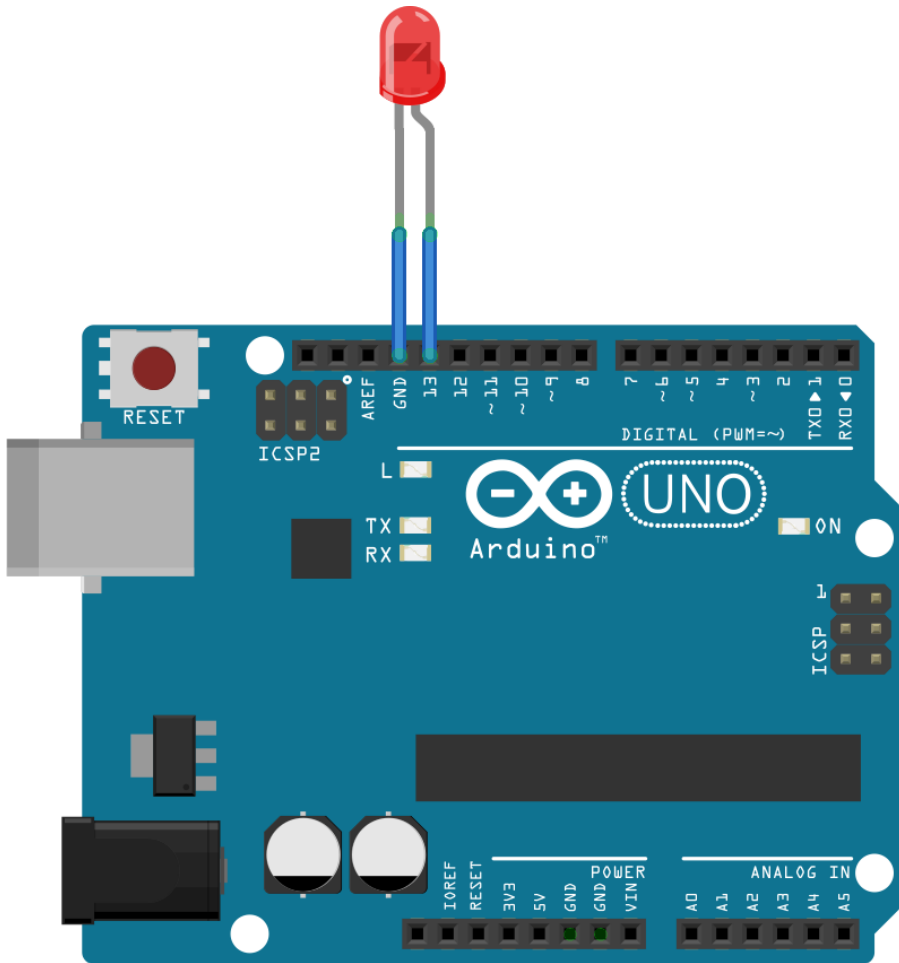
```
void setup()  
{  
  pinMode(13, OUTPUT);  
}  
  
void loop()  
{  
  digitalWrite(13, HIGH);  
}
```

Setting
INPUT/OUTPUT

Numero del
pin 0-13

Stato
HIGH/LOW

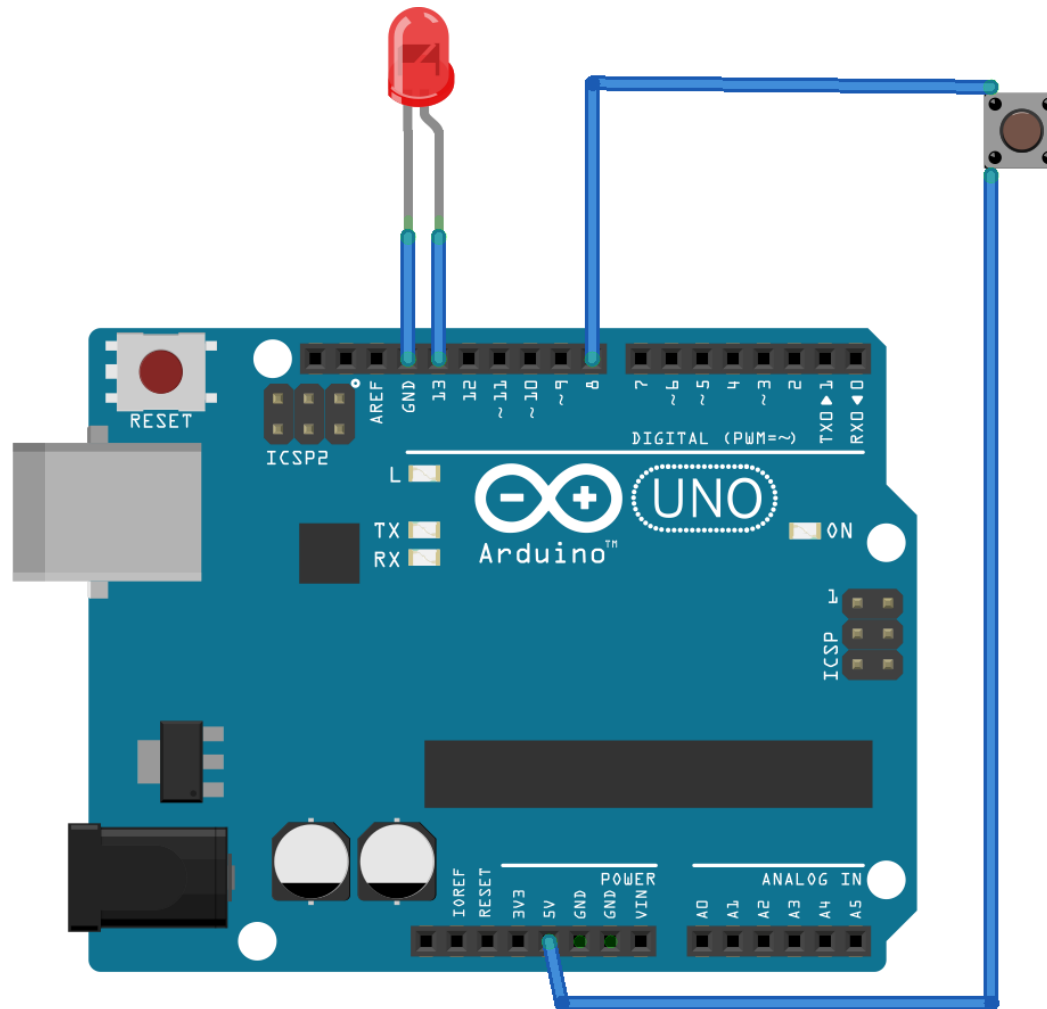
2. LED LAMPEGGIANTE



```
void setup()
{
  pinMode(13, OUTPUT);
}

void loop()
{
  digitalWrite(13, HIGH);
  delay(1000); → Aspetta 1000
                millisecondi
  digitalWrite(13, LOW);
  delay(1000);
}
```

3. LED E TASTO



3. LED E TASTO

```
int in;
```

```
void setup()
```

```
{
```

```
  pinMode(13, OUTPUT);
```

```
  pinMode(8, INPUT);
```

```
}
```

Imposta pin
come output

```
void loop()
```

```
{
```

```
  in = digitalRead(8);
```

Legge valore
del pin

```
  if(in == HIGH)
```

```
  {
```

Se è HIGH
fa questo

```
    digitalWrite(13, HIGH);
```

```
  }
```

```
  else
```

```
  {
```

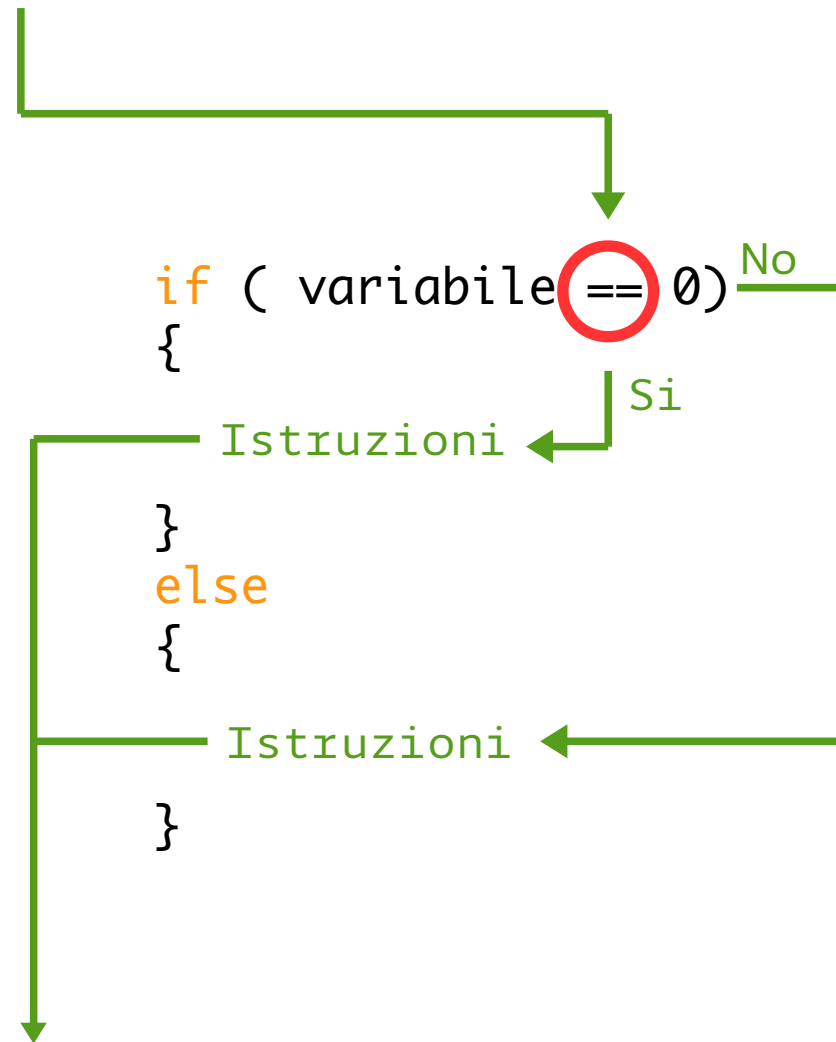
Se è NON è HIGH
fa questo

```
    digitalWrite(13, LOW);
```

```
  }
```

```
}
```

IF



== Uguale

> Maggiore

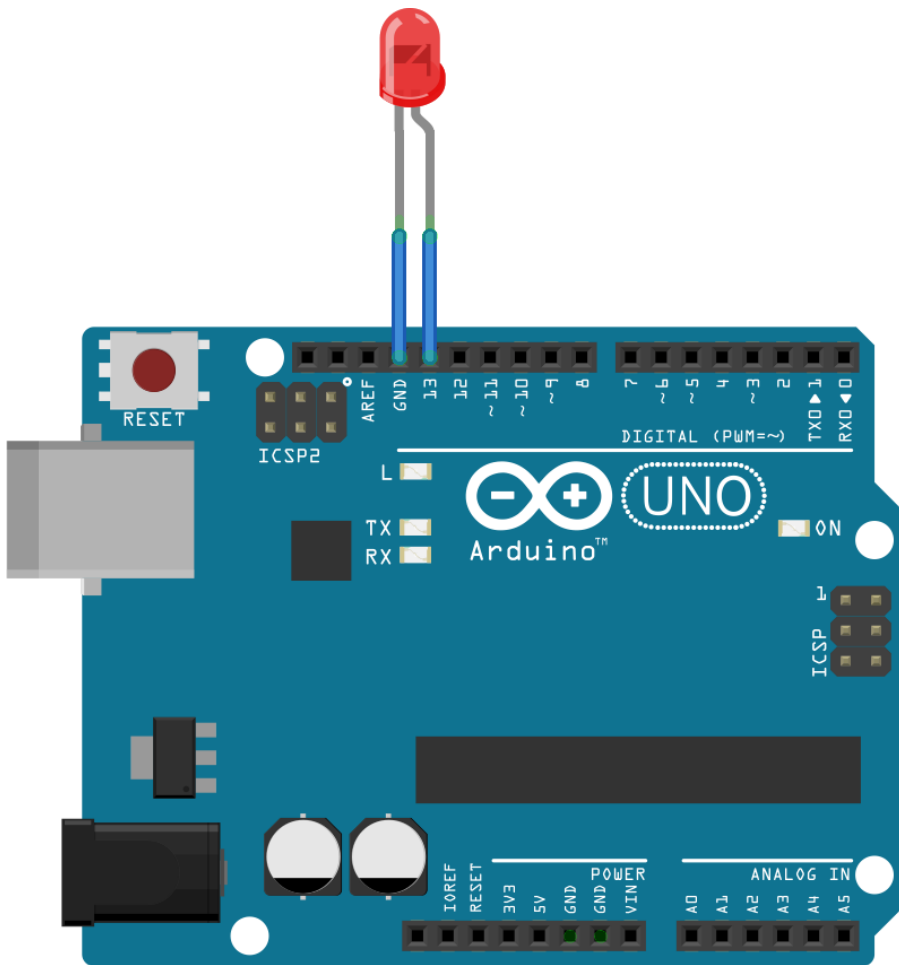
>= Maggiore o uguale

!= Diverso

< Minore

<= Minore o uguale

4. FADE LED



`int i;` → Dichiarare la
variabile `i`

```
void setup()  
{  
  pinMode(13, OUTPUT);  
}
```

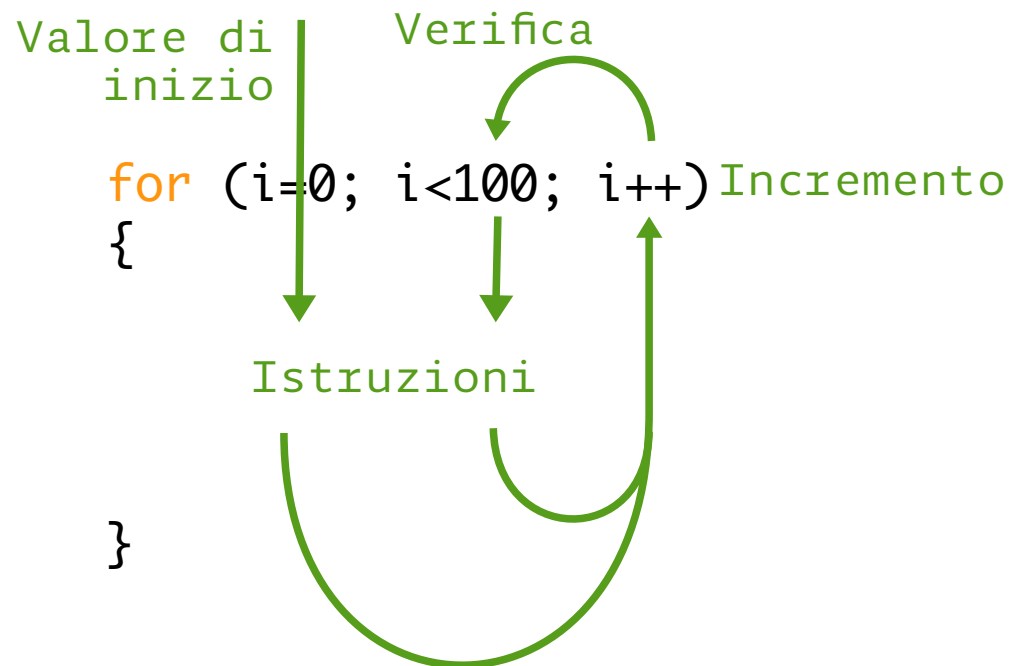
```
void loop()  
{  
  for(i=0; i<255; i++)  
  {  
    analogWrite(13, i);  
    delay(5);  
  }  
}
```

Ripete
255 volte

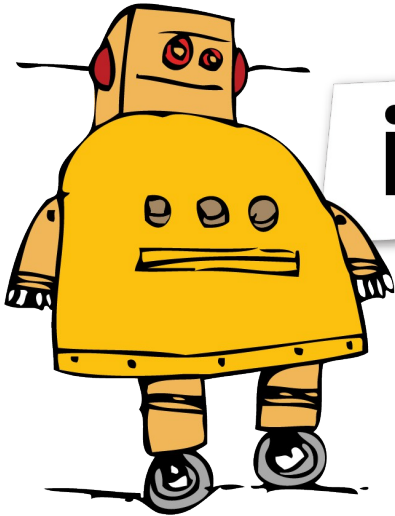
Scrivi un
valore analogico

CICLO FOR

`int i;` → Dichiaro la variabile `i`



SITI



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<http://www.instructables.com>

<http://www.arudino.cc>





KEEP
CALM
AND
USE
ARDUINO