Opzione Attività Tecniche

Elettricità

Obiettivi

- Comprendere le basi
- Famigliarizzare con gli attrezzi e i componenti
- Capire come funzionano oggetti elettrici comuni
- Capire concetti teorici passando da applicazioni pratiche

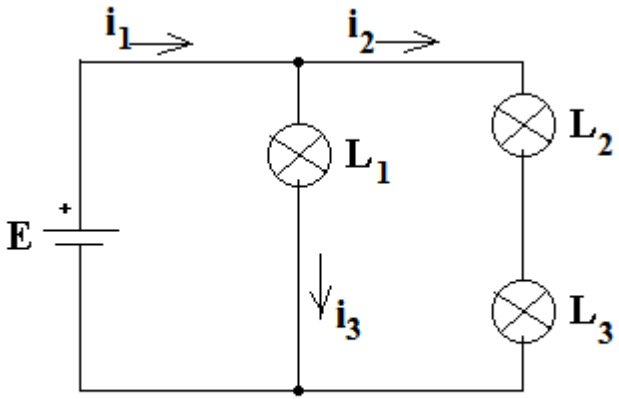
Strumenti utilizzati


DC POWER SUPPLY
0.00
24.7
CURRENT
VOLTAGE
FINE
COARSE
FINE
COARSE

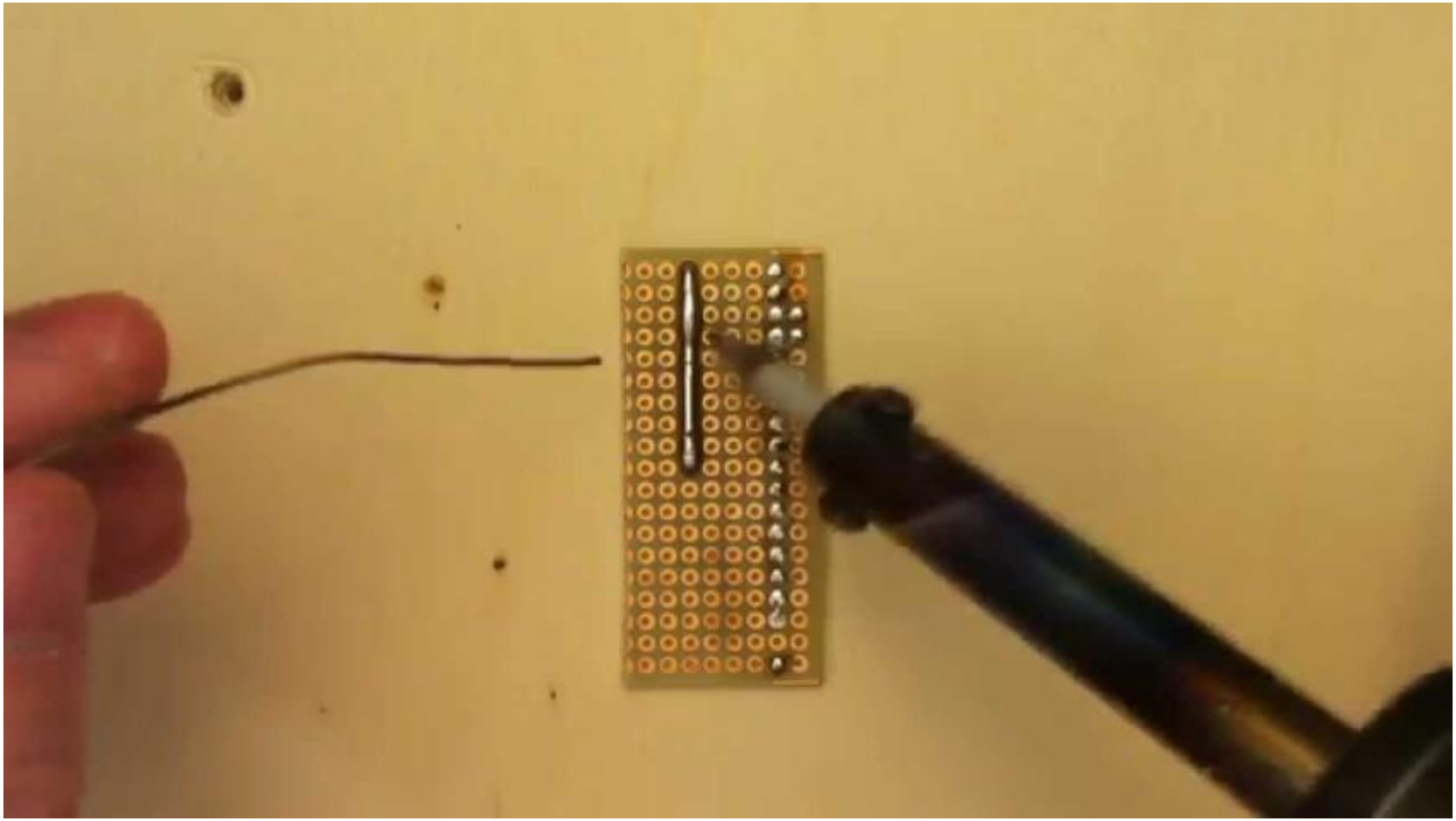

GW INSTEK


0.00
OFF
10ADC

Disegno circuiti

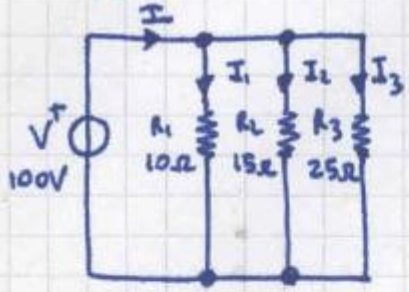


Pratica



Teoria

2 - 2



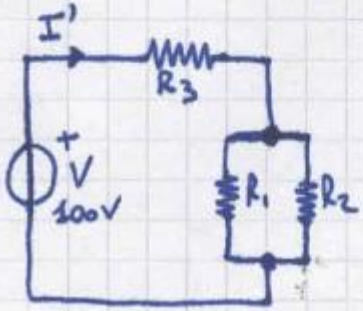
Le 3 correnti sono determinabili mediante la legge di Ohm:

$I_1 = \frac{E}{R_1} = \frac{100}{10} = 10\,A$ $I_2 = \frac{E}{R_2} = \frac{100}{15} = 6{,}66\,A$

$I_3 = \frac{E}{R_3} = \frac{100}{25} = 4\,A$

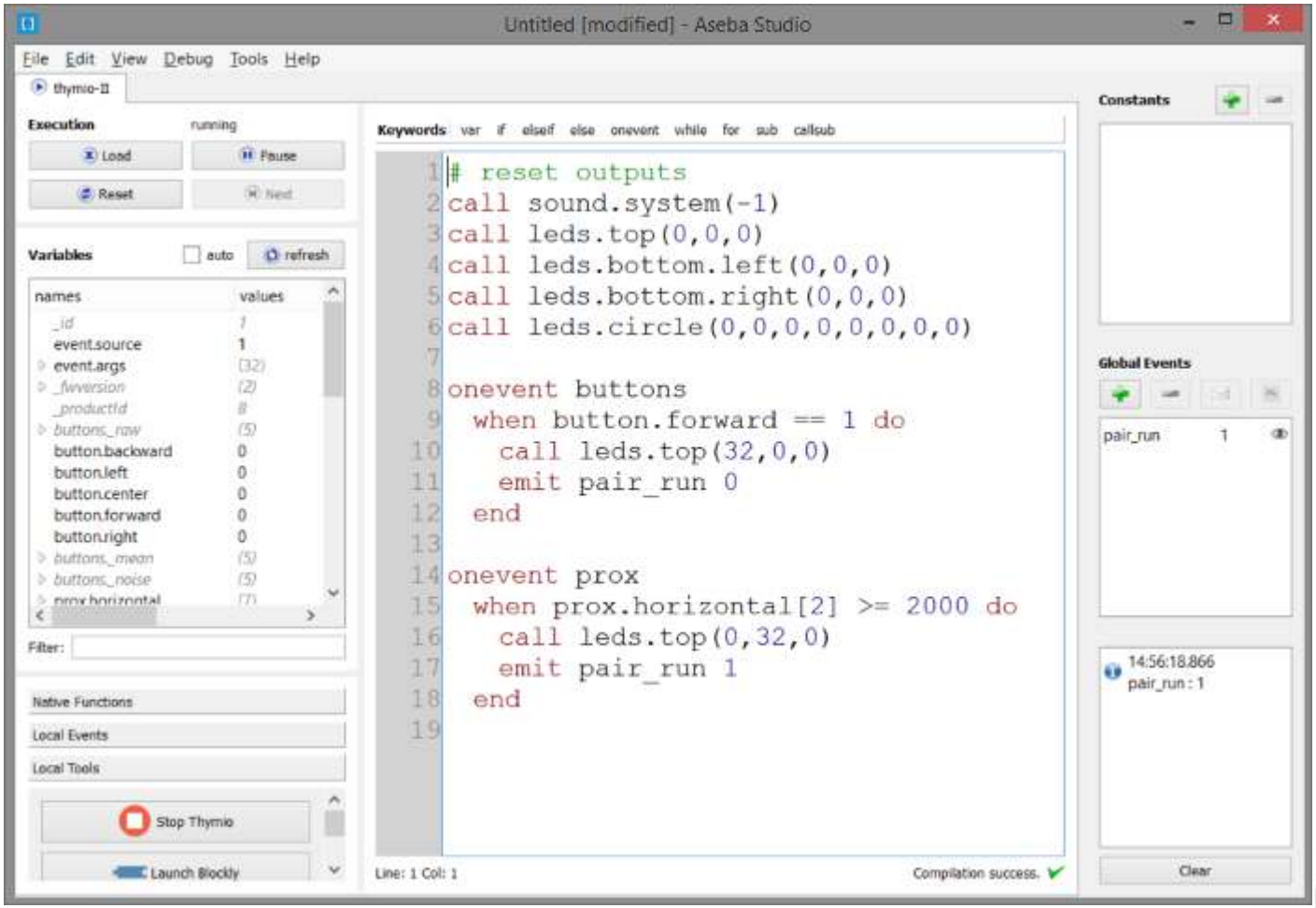
La resistenza equivalente vale $R_{eq} = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}} = 1.83\,\Omega$

Ponendo $R_1 // R_2$ in serie a R3:



$R'_{eq} = \frac{R_1 R_2}{R_1 + R_2} + R_3 = 31\,\Omega$

e la corrente $I' = \frac{V}{R'_{EQ}} = \frac{100}{31} = 3.22\,A$


Untitled [modified] - Aseba Studio
File Edit View Debug Tools Help
thymio-II
Execution
running
Load
Pause
Reset
Next
Variables
auto
refresh
names
values
_id 1
event.source 1
event.args [32]
_fwversion [2]
_productId 8
buttons_raw [5]
button.backward 0
button.left 0
button.center 0
button.forward 0
button.right 0
buttons_mean [5]
buttons_noise [5]
prox.horizontal [7]
Filter:
Native Functions
Local Events
Local Tools
Stop Thymio
Launch Blockly
Keywords var if elseif else onevent while for sub callsub
1 # reset outputs
2 call sound.system(-1)
3 call leds.top(0,0,0)
4 call leds.bottom.left(0,0,0)
5 call leds.bottom.right(0,0,0)
6 call leds.circle(0,0,0,0,0,0,0,0)
7
8 onevent buttons
9 when button.forward == 1 do
10 call leds.top(32,0,0)
11 emit pair_run 0
12 end
13
14 onevent prox
15 when prox.horizontal[2] >= 2000 do
16 call leds.top(0,32,0)
17 emit pair_run 1
18 end
19
Line: 1 Col: 1
Compilation success.
Constants
Global Events
pair_run 1
14:56:18.866
pair_run : 1
Clear


thymio

A chi interessa?