Politecnico di Milano — Scuola di Design — A.A. 2018/2019

TECHNOLOGIES FOR CONNECTED PRODUCTS AND SYSTEMS

Handson number 2.

Preamble

- To gain points in the PDS evaluation, each group is required to submit a deliverable of this homework by October 16th at 23:59 on Beep. Deliverables should be submitted in the "`TCPS - Hands-on work`" folder.
- The overall weight of the homework in TCPS is 5% of the PDS evaluation.
- This homework will weigh 2% of 5%.

Deliverable format

- The deliverable you have to upload is a **single `pdf` file** containing snapshots of your Makecode program (as you can grab from the browser) together with a link to the program itself, using the link sharing functionality of Makecode.
- Please indicate, at the beginning of the pdf file, all the members of the group that participated in the homework.
- Only deliverables sent through Beep in `pdf` form will be accepted for TCPS evaluation.
- **Deliverable naming**: the pdf file to be submitted must have a name as follows:

  `handson_num_name.pdf`

  where `<num>` is the number of the handson, as at the top of this page, while `<name>` must be the last name of the contact person of the group (all lower case). For example, if I had to submit a deliverable with this naming, that would be:

  `handson_2_zaccaria.pdf`

What you will learn in this exercise

This hands-on is designed to make you work with event handling on the Adafruit Circuit Playground board. You will learn how to specify how actions can be registered as event handlers.

Assignments

TODO Assigmnent n. 1

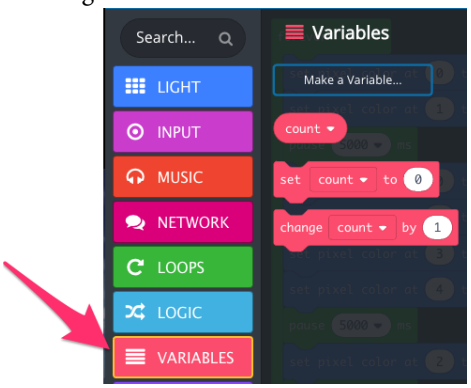
In this assignment you should create and test a program that:

- Counts independently button presses on A and B buttons.
- When the number of presses of button A reaches 5, it should show a light pattern (your choice)
- When the number of presses of button B reaches 5, it should show a different light pattern (your choice)
- For example, if the user presses:
  - 2 times A
  - 3 times B
  - 3 times A

the light pattern associated with A should be shown because the total number of presses of A has reached five. Same thing for B if the user presses additionally 2 times B.

Suggestions

You might want to create two variable counters in the "Variables toolbox", give them a name (e.g., `countA` and `countB`) and manage them in two different event handlers for `A` and `B`.



TODO Assignment n. 2

In this assignment you should create and test a program that

- Reads continuously the temperature by showing it in a scale of colors of the led lights
- Can be turned on and off with a finger snap (sound).

Suggestions

You might want to create a variable that manages the state of the thermometer (`on` and `off`) and show the lights only if the state variable is `on`.