

TECHNOLOGIES FOR CONNECTED PRODUCTS AND SYSTEMS

Handson number 3.

Preamble

- To gain points in the PDS evaluation, each group is required to submit a deliverable of this homework by October 23th at 23:59.

IMPORTANT This time, deliverables should be sent by email to vittorio.zaccaria@polimi.it.

- 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 zip file** containing the Arduino Sketches of your solution and a textual file indicating all the members of the group that participated in the homework.
- **Deliverable naming:** the zip file to be submitted must have a name as follows:

`handson_num_name.zip`

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_3_zaccaria.zip`

What you will learn in this exercise

This hands-on is designed to make you acquainted with the Circuit Playground Express board in the Arduino environment.

Assignments

Assignment n. 1

Create a sketch that allows interacting with capacitive touch on the CPX board. On a long press on a pin (e.g., > 500ms), turn the leds green. On a short tap, turn leds blue.

Assignment n. 2

- Preliminary step: download the example sketch from [this link](#). It contains some sampled audio speech (alphabet letters).
- Modify it such that it spells all the letters of the alphabet one after the other.

Assignment n. 3

Create a program that interprets long and short taps as morse code and spells the corresponding letter.