# LearnCbot

Didel designed a cheap little Arduino shield which simulates a robot base.
The objective is to learn C by programming the typical functions a robot must perform:
read wiskers, move motors both direction, lit LEDs and make noise.

Following the EPFL Coursera on microcontrollers
https://www.coursera.org/course/microcontroleurs
It appeared one has to complete theory by lots of exercices. These exercices have to be done with wired boards, which are more reliable than breadboards, and correspond exactly to the explanations on the exercices and their solutions. The objective is learning to program, not searching for bad connections.

LearnCbot includes LEDs, push-buttons and a little loudspeaker. These components are necessary to design a robot base and the proposed exercices permit to acquire all knowledge you need to control a real robot, without loosing time running behind the moving vehicule !
It is also easy to add Grove modules to test sensors.
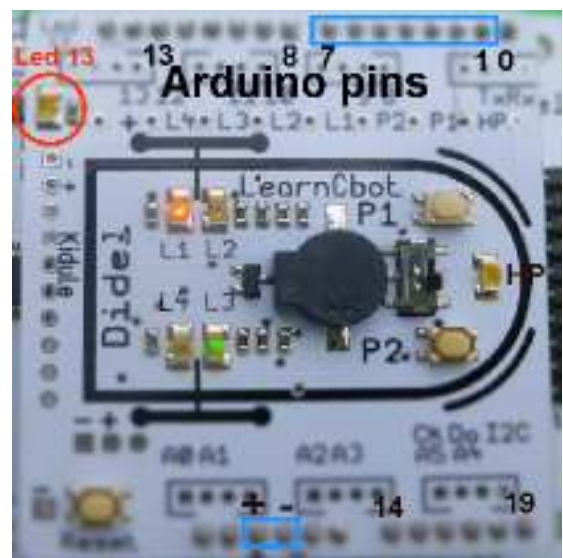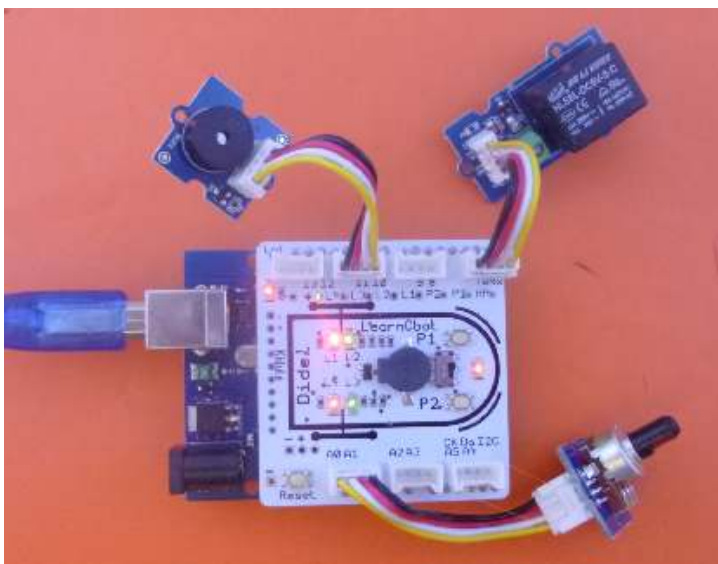
Documentation structure

For beginners
  Load programs and progressively understand instructions and all what the processor can do.

For learning real-time C
  Solve many exercices to assimile C potentialities and subtilities for handling inputs, outputs, interrupts and timers.S

For designing one's own applicationn
  Experiment with all kinds of Grove sensors (not included in the LearnCbot package).
  The LearnCbot card has 9 grove connectors, quite enough for testing Grove modules and future Didel sensor and display modules.
  Choose and program the best sensors and displays for your application:
  robot, météo station, domotic or light show.

  Description   www.didel.com/diduino/LearnCbotFeatures.pdf
                       www.didel.com/diduino/LearnCbotOptions.pdf