

Homework 2: general rules

- This homework requires teamwork
- Each project is assigned to two groups, but inter-group collaboration is **not** allowed
- Groups may also opt for the «challenge project» in place of the pre-assigned one
 - Groups that opt for the challenge project **MUST** declare this using activity on the moodle webpage by **April 18**
- Suggestion: reuse one or more of the following examples
 - GPIO_LED_Button_1 for KIT_AURIX_TC375_LK
 - ADC_Filtering_1_KIT_TC375_LK
 - ASCLIN_UART_1_KIT_TC375_LK
 - Blinky_LED_1_KIT_TC375_LK



Projects assignment

- Groups A & B:
 - Write a code that switches ON a LED for ~~10 ms~~ **3s** each time a button is pressed. Multiple button pressures during the ON period of the LEDs are neglected.
- Groups C & D:
 - Write a code that reads the output voltage of the potentiometer, quantizes it in four levels, and changes the blinking frequency of the LED proportionally to such a value.
- Groups E & F:
 - Write a code that switches ON or OFF an LED, depending on whether an UART message sent by the microcontroller is “LED ON” or “LED OFF”

Challenge project

- Challenge project (+5% in final grade):
 - Starting from ADC_Filtering_1_KIT_TC375_LK and MCMCAN_TX_RX_KIT_TC375_LK (available on the moodle webpage) the goal is to read a value from an ADC channel and send it, as part of a CAN message, to a remote receiver connected through CAN bus
- If you opt for this project, check the related box in moodle
- If you fail to make the system work, still upload your code and readme file with an explanation of the problem you faced

Homework 2: deliverable

- Upload in the moodle website all and only the files that you have modified, together with a README.txt text file which briefly describes the process you have followed to produce your code, the changes you have made, and WHY.
- Any change to the code has to be properly commented
 - Each comment must start with “Group#> where # is your group number, so as to ease the identification of the changes.
- **Remark:** any team can be asked to provide a demonstration of their project during the final exam

