DIO Challenges

1.1- Write Embedded C Code to Toggle LED0 connected to PORTC.2 each 500ms.

1.2- Write Embedded C code to toggle the three LEDs Sequentially.

1.3- Write Embedded C code to Toggle LED0 connected to PORTC.2 each 500ms and LED2 connected to PORTD.3 each 1000ms.

1.4- Write Embedded C code to control LED0 using Button0 as follow:

- While Button0 is Pressed, LED0 ON.
- While Button0 is Released, LED0 OFF.

1.5- Write Embedded C code to control LED0 using Button0 as follow:

- While Button0 is Pressed, LED0 Toggle.
- While Button0 is Pressed, LED0 OFF.

1.6- Write Embedded C code to control LED0 and LED1 using Button0 and Button1 as follow:

- If Button0 is Pressed, LED0 Toggle.
- If Button1 is Pressed, LED1 Toggle.

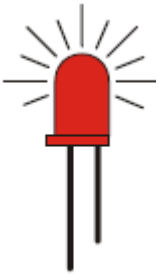
Project (1-1)

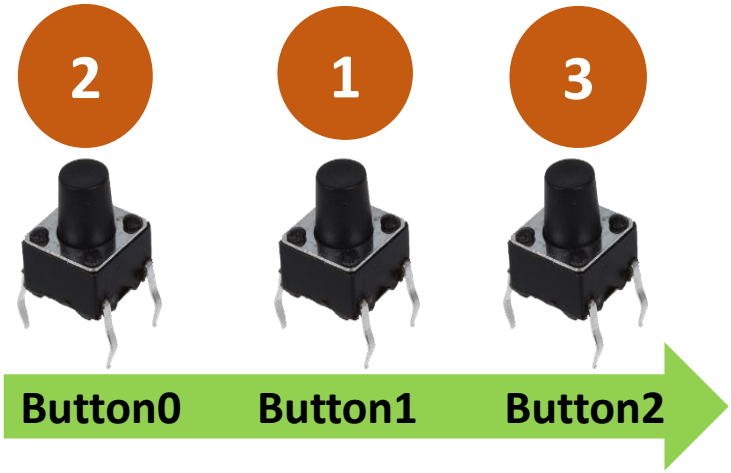
We need to make a password which is a combination of some presses in sequential manner (2 presses on Button0 & 1 press on Button1 & 3 presses on Button2).

Write Embedded C code to check password.

TRUE -> Turn LED ON for 500 ms then turn OFF.

FALSE -> Turn BUZZER ON for 500 ms then turn OFF.





1.7- Write Embedded C code to implement Up-Down (00:99) counter on SSD controlled by Button0 (counts Up) and Button2 (counts Down).

1.8- Enhance the previous challenge to count up or down without flickering.

1.9- Write Embedded C code to implement Up (00:99) without SSD flickering.

Project (1-2)

We need to make a timer device activator.

BUTTON1-> press it to set timer value, then press it again to activate the device and start counting down.

BUTTON2->press it to increment timer value.

BUTTON0->press it to decrement timer value.