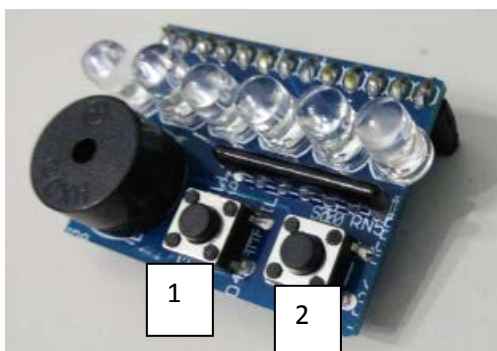


List of exercises

1. Write a program that turns one red led, one yellow led and one green led of the expansion board. At startup, we know that the LEDs are all off. Denote Exer1.s this program. Remember that due to the lack of an operating system, your program has to finish by an infinite loop.
2. Write a program that turns on one of the yellow leds while you are pressing one of the buttons, and it turns it off if you release the button.
3. Write a program that turn on the two green leds after pressing one button (edge triggered). If the other button is pressed, both leds will turn off.
4. Write a program that after pressing the button 1, one of the yellow leds turns on permanently, and if you press the button 2 a green led will turn on permanently.
5. Write a program that turns on the two red LEDs. After this, the program polls the state of the push buttons. Once a push button is pressed, the corresponding LED will keep on, whereas the other LED will turn off.
6. Modify the program Ejer1.s to create a new one which flashes the LEDs at the rate of 1 s. ON-OFF. Insert the corresponding delay using the timer.
7. Flash the LEDs at a rate of 1 s. ON, 0.25 s. OFF by using the timer.
8. Modify the program of the previous exercise such that instead of acts on the LED, it generates a 440Hz tone (note LA) on the speaker.
9. Write a program that the green LEDs flashes at a rate of 1 second ON-OFF, then at a rate of 500 ms. ON-OFF and finally 250 ms. ON-OFF in an infinite loop.
10. Write a new program which polls both the buttons 1 (GPIO 2) and 2 (GPIO 3). If the first pressed button is the button 1, a tone of 262Hz (note DO) has to be generated. Otherwise, if the first pressed button is the botton 2, a tone of 391Hz (note SOL) is generated.



Note	Frequency
Do	252 Hz
Re	293 Hz
Mi	330 Hz
Fa	349Hz
Fa#	370Hz
Sol	392 Hz
La	440 Hz
Si	494 Hz
Do'	523 Hz
Re'	587 Hz