Challenge 1

Write Embedded C code using ATmega16/32 µC to control two Leds using two Push Buttons.

Requirements:

1.

2.
- ✓ **Configure the PC clock with internal 1Mhz Clock.**
- ✓ **The Push Buttons 1 & 2 are connected to pin 0 & 1 in PORTB.**

3.
- ✓ **Connect both Push Buttons using Pull Down configuration.**
- ✓ **The Led 1 & 2 is connected to pin 0 & 1 in PORTC.**

4.
- ✓ **Connect both Leds using Positive Logic configuration.**

5.
- ✓ **If Push Button 1 is pressed just turn on the first Led 1 only**
- ✓ **And if Push Button 2 is pressed just turn on Led 2 only.**
- ✓ **In case both Push Buttons are pressed both Leds are on.**
- ✓ **In case no Push Buttons are pressed both Leds are off.**

D-BUGERZ

Challenge 2

Write Embedded C code using ATmega16/32 µC to control 3-LEDs.

Requirements:

- ✓ **Configure the µC clock with 16Mhz Crystal Oscillator.**
- ✓ **Use the 3 LEDs at PC0, PC1 and PC2.**
- ✓ **LEDs are connected using Negative Logic configuration.**
- ✓ **A roll action is perform using the LEDs each led for half second. The first LED is lit and roll down to the last LED then back to the first LED. This operation is done continuously.**
- ✓ **After this Sequence make the buzzer ON for 2 second.**

1.

2.

3.

4.

5.

D-BUGERZ