**Lab 3**

Start PICSimLab. Select PIC16F877A as microcontroller using the microcontroller tab. Select McLab2. Select **1 MHz** clock.

The schematic of board McLab2 is available at **PICSimLab** → **Help** tab → **Contents** tab → **English Manual** link → **Features of Board 2** link → **Board 2 Schematics** link.

Configure the microcontroller through your code as follows:

\_\_CONFIG \_FOSC\_XT & \_WDTE\_OFF & \_PWRTE\_OFF & \_MCLRE\_OFF & \_BOREN\_OFF & \_LVP\_OFF & \_CPD\_OFF & \_CP\_OFF

Program the microcontroller so that the prescaler of the Timer 0 will be **1:256** and **L1 LED** on the board will be turned ON and OFF every 200 milliseconds.

(L1 LED will be ON for 200 ms and OFF for 200 ms).

Create a video which displays:

1. you used timer interrupt in the code, (10 points, -100 pts otherwise)
2. you set the prescaler to 1:256, (10 points)
3. the code is successfully built (compiled), (10 points)
4. the HEX output is loaded onto PICSimLab, (10 points)
5. you selected 1 MHz clock, (10 points)
6. oscilloscope output proves that the board works as described in this manual. (50 points)

The video should include your video in the upright position and your voice while you are performing and explaining the above actions (-100 points otherwise). There is no need to explain the code in the video.

The video filename and source code filename should be named as follows:

Microprocessors\_Lab\_3\_StudentNumber\_Name\_Surname.mp4

Microprocessors\_Lab\_3\_StudentNumber\_Name\_Surname.asm

*Example:*

*Microprocessors\_Lab\_3\_69284571\_Mehmet\_Kocaturk.mp4*

*Microprocessors\_Lab\_3\_69284571\_Mehmet\_Kocaturk.asm*

Please only upload the video file and .asm file into Microsoft Teams assignment.