**Lab 2**

Start PICSimLab. Select PIC16F877A as microcontroller using the microcontroller tab. Select McLab2. Select 4 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

1. when S1 is pressed, the leftmost digit of your student number will be displayed on the leftmost 7-segment display
2. when S4 is pressed, the rightmost digit of your student number will be displayed on the rightmost 7-segment display
3. when none the switches are pressed, 7-segment displays will show nothing (all segments of the displays will be off).

For example, the student number is *69284571.* The leftmost 7-segment display will show **6** and the rightmost 7-segment display will show **1**. Below flow chart explains the task presented here.

Create a video which displays:

1. the code you prepared on MPLAB,
2. the code is successfully built (compiled),
3. the HEX output is loaded onto PICSimLab,
4. the board works as described in this manual.

The video should include your video in the upright position and your voice while you are performing and explaining the above actions. 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\_1\_StudentNumber\_Name\_Surname.mp4

Microprocessors\_Lab\_1\_StudentNumber\_Name\_Surname.asm

*Example:*

*Microprocessors\_Lab\_1\_69284571\_Mehmet\_Kocaturk.mp4*

*Microprocessors\_Lab\_1\_69284571\_Mehmet\_Kocaturk.asm*

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