16F877A PICMicro programming under MPLAB – Project Checklist

Instructions:

Table 1 – Team Members and Contributions:

You are required to clearly define how you managed the project as a team. Please specify the individual contributions of each member in the "Contributions" field.

Table 2 – Checklist:

You are also required to fill out Table 2 honestly. All fields marked "Yes" will be verified during the project discussion.

Table 1: Team Members and Contributions

Team Member Name	Team Member ID	Contributions
Talin Abuzulof	1211061	Coprocessor + Master
Mays Ajaleen	1211242	Coprocessor
Hala Jebreel	1210606	Master
Mayar Jafar	1210582	Master

Table 2: Checklist

#	Action Required	Did you implement… ?		Does it work?	
		Yes	No	Yes	No
1	Display "Welcome to" and "Division" blinking 3 times with 0.5s delay on power-up	YES		YES	
2	Wait 2 seconds after the welcome message before input starts	YES		YES	
3	Show "Number 1" on LCD and allow digit-by-digit input using button P	YES		YES	
4	Increment digit on each click, wrap from 9 → 0	YES		YES	
5	Lock digit after 1 second of inactivity	YES		YES	
6	Auto-fill remaining digits with same value as first digit	YES		YES	
7	Allow user to manually adjust each digit	YES		YES	
8	Support double-click to skip integer input and go to decimal part	YES		YES	

		YES		YES	
9	Allow similar entry for decimal part (auto-fill and manual adjustment supported)	YES		YES	
10	Support double-click to confirm decimal part and move to Number 2	YES		YES	
11	Show "Number 2" on LCD for 1 second	YES		YES	
12	Allow same digit-by-digit entry process for Number 2	YES		YES	
13	After second number is entered, show "=" on screen	YES		YES	
14	Master sends Number 1 (int & decimal) to co-processor via PortC with interrupts and acknowledgments	YES		YES	
15	Master sends Number 2 similarly	YES		YES	
16	Co-processor performs division correctly	YES		YES	
17	Co-processor sends result back byte-by-byte using interrupts + acknowledgments	YES		YES	
18	Master displays result on LCD second line, "Result" on first line	YES		YES	
19	While result is displayed, button P cycles through Number 1 → Number 2 → Result	YES		YES	
20	Double-click on P restarts the process from Number 1 input	YES			NO
21	Proteus schematic includes: 2 × 16F877A MCUs, push button, LCD	YES		YES	
22	LCD connected via PortD in 4-bit mode with 4.7kΩ RS pull-up resistor	YES		YES	
23	Push button connected to PortB.0 with 10kΩ pull-up (external or internal)	YES		YES	
24	Data transferred over PortC between master and co-processor	YES		YES	
25	4 MHz oscillator and 2×15pF capacitors connected correctly	YES		YES	
26	10kΩ pull-up resistor connected to MCLR pin	YES		YES	