Task 1

Window: C:\Users\l236006\Documents\Untitled22.asm

```
        LIST P=16F877
        INCLUDE <P16F877.INC>
        ORG 0x00
        GOTC MAIN

MAIN:
        MOVLW 0x07
        MOVWF 0x11
        MOVLW 0x72
        MOVLW 0x21
        MOVLW 0xD6
   ->   MOVWF 0x22
        END
```

Window: Program Memory

Line	Address	Opcode	
1	0000	2801	GOTO 0x1
2	0001	3007	MOVLW 0x7
3	0002	0091	MOVWF 0x11
4	0003	3072	MOVLW 0x72
5	0004	00A1	MOVWF 0x21
6	0005	30D6	MOVLW 0xd6

Opcode Hex Machine Symbolic

Window: Special Function Registers

Address	SFR Name	Hex
	WREG	0xD6
000	INDF	--
001	TMR0	0x00
002	PCL	0x06
003	STATUS	0x1B
004	FSR	0x00
005	PORTA	0x00
006	PORTB	0x00

Window: File Registers

Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	ASC
000	--	00	06	1B	00	00	00	00	00	00	00	00	00	00	00	00	-........
010	00	07	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
020	00	72	D6	00	00	00	00	00	00	00	00	00	00	00	00	00	.r......
030	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
040	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
050	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
060	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
070	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
080	--	FF	06	1B	00	3F	FF	FF	FF	07	00	00	00	00	00	--	-.....?..
090	--	00	FF	00	00	--	--	--	02	00	--	--	--	--	00	00	-.....---
0A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	

Hex Symbolic

```
Warning[203] C:\USERS\L236006\DOCUMENTS\U
Warning[203] C:\USERS\L236006\DOCUMENTS\U
Warning[203] C:\USERS\L236006\DOCUMENTS\U
Warning[203] C:\USERS\L236006\DOCUMENTS\U
Warning[203] C:\USERS\L236006\DOCUMENTS\U
Warning[203] C:\USERS\L236006\DOCUMENTS\U
Warning[203] C:\USERS\L236006\DOCUMENTS\U
Warning[205] C:\USERS\L236006\DOCUMENTS\U
Loaded C:\Users\l236006\Documents\Untitled22.co

Debug build of project `C:\Users\l236006\Documen
Preprocessor symbol `__DEBUG' is defined.
Thu Aug 28 12:04:57 2025
```

BUILD SUCCEEDED

Task 2

Window: mp.mcw

```
mp.mcp
  Source Files
      Untitled22.asm
  Header Files
  Object Files
  Library Files
  Linker Script
  Other Files
```

Files Symbols

Window: C:\Users\l236006\Documents\Untitled22.asm

```
        ORG 0x00
        GOTC MAIN

MAIN:MOVLW 0x0A
        MOVWF 0x20
        MOVLW 0x05
        MOVWF 0x21
        MOVF 0x20, W
        ADDWF 0x21, W
        MOVWF 0x22
        MOVLW 0x08
        SUBWF 0x21, W
  ->    MOVWF 0x23
        END
```

Window: Program Memory

Line	Address	Opcode	
10	0009	0221	SUBWF 0x21, W
-> 11	000A	00A3	MOVWF 0x23
12	000B	3FFF	
13	000C	3FFF	
14	000D	3FFF	
15	000E	3FFF	

Opcode Hex Machine Symbolic

Window: Special Function Registers

Address	SFR Name	Hex
	WREG	0xFD
000	INDF	--
001	TMR0	0x00
002	PCL	0x0A
003	STATUS	0x18
004	FSR	0x00
005	PORTA	0x00
006	PORTB	0x00
007	PORTC	0x00
008	PORTD	0x00
009	PORTE	0x00

Window: File Registers

Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	ASCII
000	--	00	0A	18	00	00	00	00	00	00	00	00	00	00	00	00	-........ ....
010	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
020	0A	05	0F	FD	00	00	00	00	00	00	00	00	00	00	00	00	....
030	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
040	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
050	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
060	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
070	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
080	--	FF	0A	18	00	3F	FF	FF	FF	07	00	00	00	00	00	--	-.....?.. ....
090	--	00	FF	00	00	--	--	--	02	00	--	--	--	--	00	00	-.....--- .,-----.
0A0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0B0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0C0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0D0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
0F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	....
100	--	00	0A	18	00	--	00	--	--	--	00	00	00	00	00	00	-.....-.- --......

Hex Symbolic

```
Loaded C:\Users\l236006\Documents\Untitled22.cod.

Debug build of project `C:\Users\l236006\Documents\mp.mcp
Preprocessor symbol `__DEBUG' is defined.
Thu Aug 28 12:24:35 2025
```

BUILD SUCCEEDED

Task 3


```asm
        INCLUDE <P16F877.INC>

        ORG 0x00
        GOTO MAIN
MAIN:   BSF STATUS, RP0
        BCF STATUS, RP1
        CLRF TRISB
        BCF STATUS, RP0
        MOVLW 0x09
        MOVWF 0x30
        MOVLW 0x07
        MOVWF 0x31
        MOVLW 0x04
        MOVWF 0x32
        MOVF 0x30, W
        ADDWF 0x31, W
        SUBWF 0x32, W
        MOVWF 0x33
        INCF 0x33, F
        MOVF 0x33, W
        MOVWF 0x34
        DECF 0x34, F
        MOVF 0x34, W
        MOVWF PORTB
        END
```