先打開 MPLAB IDE



點選 project 中的 Project Wizard

💦 MPLAB IDE	v8.50
<u>F</u> ile <u>E</u> dit <u>V</u> iew	<u>Project</u> Debugger Programmer <u>T</u> ools <u>C</u> onfigure <u>W</u> indow <u>H</u> elp
🗋 🖻 🚅 🗌	Project Wizard ?
Untitled	New Open Close Set Active Project Quickbuild (no .esm file) Package in .zip Clgan Build Configuration Build Options
	Save Project Save Project <u>A</u> s Add Files to Project Add New File to Project <u>Remove File From Project</u> Select Language <u>Toolsuite</u> Set Language <u>Tool L</u> ocations <u>Version Control</u>





選擇 IC (依板子上的 IC 型號選擇 PIC18F452 或是 PIC18F4520)

Project Wizard		
Step One : Select a device		ال پ
	Device:	
	PIC18F452	
	<上一步图 下一步图 取消 [說明

選擇 Microchip MPASM Toolsuite 再點選下一步

Project Wizard
Step Two: Select a language toolsuite
Active Toolsuite: Microchip MPASM Toolsuite Toolsuite Contents MPASM Assembler (mpasmwin.exe) v5.35 MPLINK Object Linker (mplink.exe) v4.35 MPLIB Librarian (mplib.exe)
Location C:\Program Files\Microchip\MPASM Suite\MPASMWIN.exe
Store tool locations in project
Help! My Suite Isn't Listed!
<上一步(B) 下一步(N) > 取消 說明

選擇 project 位置

oject Wizard	Normal State
Step Three: Create a new project, or reconfigure the active project?	ر پر
Oreate New Project File	
D:\test	Browse
O Reconfigure Active Project	
Make changes without saving	
 Save changes to existing project file 	
Save changes to another project file	
D:\789.mcp	Browse
《上一步图》 下一步图 > 取〉	消

選擇下一步

Project Wizard			×
Step Four : Add existing files to your project			₿ _৴ ৢ
D: 13 13 213 ads BT-MicroEDR2X Com 258.txt 123.asm 123.cof 123.err 123.HEX 123.lst 123.map	Add >> Remove		
<上─步@	3) 下一步(1	D> 取消	說明

然後完成



在 Project 中選擇 Add New File to Project

🔊 t	est - b	(PLAE	IDE v8	.50 - test.i	ncw										
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□ isst.mew □ test.mew □ test.mew □ test □ test			Proje <u>N</u> ew. <u>Open</u> <u>C</u> lose Set A <u>Quic</u> Packa Clean Expo <u>B</u> uild <u>M</u> ake Build Build	ct <u>W</u> izard ctive <u>P</u> roject kbuild (no .a age in .zip 1 rt Makefile 1 All 2 1 Configurati 0 Options	sm file) on	Ctrl+F10 F10	• •	Deb	<u>ug</u>					0	
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2															

選擇相同路徑並輸入與前面相同的檔名後加上.asm

Add New File	to Project		? 🛛
儲存於①:	🧼 本機磁碟 ((D:)) 🏚 📂 🛄-
13 213 ads BT-MicroE com Config.Msi	DR2X	RECYCLER System Volume Information 123.asm 123.cof 123.err 123.HEX	 123.lst 123.map 123.O 159.asm 159.cof 159.err
▲ 檔案名稱(M): 存檔類型(T): Jump to:	test.asml All Files (*.*) D:\	✓	▶ 【儲存③】 取消

輸入完程式碼後,點選 Build All

💦 test - k	MPLAB IDE v8.50							
<u>File E</u> dit	<u>V</u> iew <u>P</u> roject <u>D</u> ebugg	er Programmer <u>T</u> oo	ls <u>C</u> onfigure <u>W</u> i	ndow <u>H</u> elp		_		
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1						Build All	Checksum:	0×8248
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		1						
	📕 test.mcp*							
6	Source Files	D:\test.asm*						
	Header Files		MOVLW	10H				~
	🔲 Object Files		MOVWF	99H				
	Library Files		MOVLW	11н				
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選擇 Absolute



出現 BUILD SUCCEEDED 代表程式碼正確

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test.mcp Source Files	D:\test.asm		
Lest saw Chief Files Library Files Chief Script Other Files Chief Script Chief Script Files Y Symbols		MOVLW 10H MOVWF 99H MOVLW 11H MOVWF 83H MOVLW 12H MOVWF 1FH END	Output Build Version Control Find in Files Clen: Done. Encount: Clen: Done. Build Warning(203) DUTEST ASM 1: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 2: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 1: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 2: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 5: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 5: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 5: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 5: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 5: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 5: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 7: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 7: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 7: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 7: Found opcode in column 1. MOVLW) Warning(203) DUTEST ASM 7: Found opcode in column 1. MOVLW) Warning(204) DUTEST ASM 7: Found opcode in column 1. MOVLW) Executing: "C: Program Files \Microchip\UPASM Suite\upplick.exe" /p18F452 "test.o" /u. MPLINK 4.35, Linker Copyright (1.998-2010 Microchip Technology Inc. Ercos : 0 Loaded Ditestcof. Delag build of popet Divestmop'sacceeded. Language tool vesions: MPASMW Neare v5.35, mplinkere v4.35 Preproc

🛣 test - MPLAB IDE v8.50 File Edit Yiew Project Debugger Programmer Icols Configure Window Help D 😅 🖬 | 3 🖻 🖷 | 🍏 🗛 🛩 🚚 🛼 🎗 Select <u>D</u>evice... Configuration Bits 🗧 🖽 🕲 🕒 🖉 🛤 Checksum: 0x79c8 ID Memory. Settings test.mcp Source Files dest.asm Header Files Object Files Othput Build Version Control Find in Files Clean: Done Encouting: "C: Program Files Microchip/MPASM Suite/MPASM WINerse" /q /p18F452 "testasm" // "testlst" & f"testern" / Wanning(2001 D: UTEST-ASM 2: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 2: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 2: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 2: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 3: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 4: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 4: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 4: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 4: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 4: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 4: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 5: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 4: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 5: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 5: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 6: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 6: Found opcode in column 1. (MCVUWF) Wanning(2001 D) UTEST-ASM 6: Found opcode in col MOVLW 10H MOVWF 99H Library Files MOVLW 11H MOVWF 83H MOVLW 12H MOVWF 1FH END 📄 Files 🔩 Symbols Loaded D:Vest.cof. Debug build of project 'D'#st.mcp' succeeded. Language tool versions: MPASMW IN.exe v5.35, mplink.exe v4.35 Preprocessor symbol '_____DEBUG' is defined. Wed Sep 23 11-52-13 2015 BUILD SUCCEEDED <

將綠色勾勾點選取消,才可進行修改,並將 Oscillator 設為 HS, Brown Out Voltage 改為 4.2V, Enalbed 地方改為 Disabled (不一定要改)

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	🖃 🚞 test.mcr	(1	onfiguration	Bits set in code.						
	🚊 🚞 Sourc	Address	Value	Field	Category	Setting				
		300001	27	osc	Oscillator <	RC-OSC2 as RA6				
	🔤 Heade			OSCS	Osc. Switch Enable	Disabled				
	📄 Objec	300002	OF	PUT	Power Up Timer	Disabled				
	🛁 📄 Librar			BODEN	Brown Out Detect <	Enabled				
	📄 Linker			BODENV	Brown Out Voltage 🤇	2.00				
	Cither	300003	OF	WDT	Watchdog Timer	Enabled				
				WDTPS	Watchdog Postscaler	1:128				
		300005	01	CCP2 MUX	CCP2 Mux	RC1				
		300006	85	STVR	Stack Overflow Reset	Enabled				
				LVP	Low Voltage Program	<u> Enabled </u>				
		300008	OF	CP_0	Code Protect 00200-01FFF	Disabled				
				CP_1	Code Protect 02000-03FFF	Disabled				
				CP_2	Code Protect 04000-05FFF	Disabled				
				CP_3	Code Protect 06000-07FFF	Disabled				
		300009	CU	CPB	Code Protect Boot	Disabled				
	🕞 Files 🖓 S		0.7	UPD O	Data ME Read Protect	Disabled				
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				WRI_I WDT 2	Table Write Protect 02000-03FFF	Disabled				
				WRI_Z	Table Write Protect 04000-03FFF	Disabled				
		300008	FO	WRTC	Config Write Protect	Disabled				
		300000	20	WRTB	Table Write Protect Boot	Disabled				
				WRTD	Data FF Write Protect	Disabled				
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				EBTR 1	Table Read Protect 02000-03FFF	Disabled				
				EBTR 2	Table Read Protect 04000-05FFF	Disabled				
				EBTR 3	Table Read Protect 06000-07FFF	Disabled				
		30000D	40	EBTRB	Table Read Protect Boot	Disabled				

建置成功後選擇 Configure 中的 Configuration Bits

修該完後如下圖,並將綠色勾勾重新點選

~	iest - MPLAB IDE v8.50									
Fi	File Edit <u>V</u> iew <u>Project</u> <u>D</u> ebugger Programmer <u>T</u> ools <u>C</u> onfigure <u>Window</u> <u>H</u> elp									
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	test.mcw	Configuration E	lits							
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	🗀 Objec	300002	05	PUT	Power Up Timer	Disabled				
	🗀 Librar			BODEN	Brown Out Detect	Disabled				
	📄 Linker			BODENV	Brown Out Voltage	(4.2V)				
	C Other	300003	OF	WDT	Watchdog Timer	Enabled				
				WDTPS	Watchdog Postscaler	1:128				
		300005	01	CCP2 MUX	CCP2 Mux	RC1				
		300006	80	STVR	Stack Overflow Reset	Disabled				
				LVP	Low Voltage Program	Disabled				
		300008	OF	CP_O	Code Protect 00200-01FFF	Disabled				
				CP_1	Code Protect 02000-03FFF	Disabled				
				CP_2	Code Protect 04000-05FFF	Disabled				
				CP_3	Code Protect 06000-07FFF	Disabled				
		300009	CO	CPB	Code Protect Boot	Disabled				
				CPD	Data EE Read Protect	Disabled				
	Files 15 D	30000A	OF	WRT_O	Table Write Protect 00200-01FFF	Disabled				
				WRT_1	Table Write Protect 02000-03FFF	Disabled				
				WRT_2	Table Write Protect 04000-05FFF	Disabled				
				WRT_3	Table Write Protect 06000-07FFF	Disabled				
		30000B	EO	WRTC	Config. Write Protect	Disabled				
				WRTB	Table Write Protect Boot	Disabled				
				WRTD	Data EE Write Protect	Disabled				
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				EBTR_1	Table Read Protect 02000-03FFF	Disabled				
				EBTR_2	Table Read Protect 04000-05FFF	Disabled				
				EBTR_3	Table Read Protect 06000-07FFF	Disabled				
		30000D	40	EBTRB	Table Read Protect Boot	Disabled				

點選 Debugger => Select Tool => 依照燒錄器型號選擇適當選項

test - MPLAB IDE v8 50			
Ele Edit View Breinst Dahusser Brownman Tools Confirm Wi	adauu Halp		
Prince Disconting Product Disconting Disconting Contrigute Mail Disconting Image: Select Icol Image: Select Icol Image: Mone Image: Mone Clear Memory Image: Mone Image: Mone Image: Mone	nov Tet	3	
2 PIChi 2 PIChi 2 PIChi 3 MPLABICE 2000 4 MPLABISTM 5 MPLABICE 2000 4 MPLABICE 2000 4 MPLABICE 2000 4 MPLABICE 200 7 MPLABIC		Checksum: 0x79b4	
Beader Files	10H	Output	
Diject Files	99H	Build Version Control Find in Files	
Ubray Files Uniter Script Other Files MOVLW MOVWF MOVLW MOVWF END ■ Files ₹ Symbols	11H 83H 12H 1FH	Clean Done. Executing "C-Program Files/Minochip/MPASM. Warning(203) D/TEST.ASM 1: Found opcode in Warning(203) D/TEST.ASM 2: Found opcode in Warning(203) D/TEST.ASM 5: Found opcode in Warning(203) D/TEST.ASM 5: Found opcode in Warning(203) D/TEST.ASM 6: Found opcode in Executing: "C'\Program Files\MitCroc MPL/NK 4.5, Linker Copyright (c) 1996-2010 Microchip Technology In Errors: 0 Loaded D/testcof. Debug build of project 'D/test.mop' succeeded. Language tou tecinics: MPASIMW IN.ere v5.35, r Peprocessor symbol 'DEEUG/ is defined. Wel Sep 23 11-5213 2015 BUILD SUCCEEDED	SuieWMPASMWIN.eme" /q/p18F452 "estasm" //"estlst" /e"estem" / column 1. (MCVLW) column 1. (MCVLW) column 1. (MCVLW) column 1. (MCVLW) column 1. (MCVLW) column 1. (MCVWF) n column 1. (MCVWF) n column 1. (MCVWF) n column 1. (MCVWF) n column 1. (MCVWF) column 1. (MCVMF) n column 1. (MCVMF) column 1.
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test.mcw		
Lest.asm Header Files Library Files Library Files Library Files Chher Files	MOVLW 10H MOVWF 99H MOVLW 11H MOVLW 83H MOVLW 12H MOVWF 1FH END	Output Output
Files V Symbols		

再點選 Program 進行燒錄(切勿點選 Programmer 內的 Program,需選擇下圖畫 面中的 Program,因為兩種 Program 非相同步驟)

📉 test - I	MPLAB IDE v8.50					
<u>File E</u> dit	<u>V</u> iew <u>P</u> roject <u>D</u> ebugger Prog	grammer <u>T</u> ools <u>C</u> onfis	gure <u>W</u> indow	<u>H</u> elp		
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4 🖬 🖌	test.mcv	D:\test.asm	MOVLW	10H	_	- Output
0* (}} ■ 0	Object Files Library Files Linker Script Other Files		MOVWF MOVLW MOVWF MOVLW MOVWF END	99H 11H 83H 12H 1FH	ſ	Build Version Control Find in Files PICkit 3 detected Connecting to PICkit 3 Firmware Suite Version 01.26.05 Firmware type

出現 complete 為燒錄成功

test.mcw				
🖃 🧰 test.mcp				
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Object Files		MOVWF	99H	Build Version Control Find in Files PICkit 3
Library Files		MOVLW	11H	
Other Files		MOVWF	83H	PICkit 3 detected
		MOVLW	12H	Connecting to PICkit 3 Firm ware Suite Version 01.26.05
		MOVWF	1FH	Firmware typePIC18F
		END		PiCkit 3 Connected.
				Device ID Revision = 00000007
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📄 Files 📌 Symbols				
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				() () () () () () () () () ()
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點選 View => Watch



並在 Address 部分輸入程式碼內所設定之位置

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點選 Debugger => Step Over

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<u>File E</u> d:	it <u>V</u> iew <u>P</u> roject	Debugger Programm	ner <u>T</u> o	ols <u>C</u> onfigure	<u>W</u> indow <u>H</u> elp					
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0+ (}+ ■ ■ ■	- Gbj - Gbj - Gbj - Gbj - Gbj - Gbj - Gbj	Program Read Erase Flash Device Abort Operation Reconnect Settings		MOVLW MOVWF MOVLW MOVWF END	11H 83H 12H 1FH		Add <u>SFR</u> ADCONO Update	Add Symbol Address 099 083 01F	Symbol Name 0x099 0x083 0x01F	Value OxC OxC OxC
	Files 💱	Symt								

Value 出現正確設定值即為成功

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