

Q1

The screenshot shows the Stimulus IDE interface. The main window displays an assembly file named `C:\Users\I227638\Desktop\rao.asm`. The code includes a list of assembly instructions for an AVR microcontroller, such as `BANKSEL TRISC`, `MOVWL 0xFF`, `MOVWF TRISC`, `BANKSEL PORTC`, `MOVWF PORTC, W`, `MOVWF 0x70`, `MOVWF PORTC, W`, `MOVWF 0x71`, `MOVWF 0x70, W`, `ADDWF 0x71, W`, `MOVWF 0x72`, `MOVWF 0x70, W`, `SUBWF 0x71, W`, `MOVWF 0x73`, `MOVWF 0x70, W`, `ANDLW 0xF0`, `MOVWF 0x74`, `MOVWF 0x70, W`, `ANDLW 0x0F`, `MOVWF 0x75`, and `END`.

On the right side, there is a **Pin / Register Actions** window. It contains a table with the following columns: **File**, **Pin / SFR**, **Action**, **Width**, **Units**, and **Comments / Message**. The table lists actions for pins RC0 through RC7, all set to **Set High**.

File	Pin / SFR	Action	Width	Units	Comments / Message
>	RC0	Set Low			
>	RC1	Set High			
>	RC2	Set Low			
>	RC3	Set High			
>	RC4	Set Low			
>	RC5	Set High			
>	RC6	Set Low			
>	RC7	Set High			

Below the pin actions window is a **File Registers** window. It displays a table of registers (01 to 0F) and their values in hexadecimal and ASCII. The ASCII column shows the characters `.....S.....` for register 01 and `.....Y.....` for register 02.

01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	ASCII
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
AA	53	01	A0	09	00	00	00	00	00	00	00	00	00	00S.....
FF	79	1B	00	3F	FF	FF	FF	07	00	00	00	00	00	00Y.....
00	FF	00	00	--	--	--	02	00	--	--	--	--	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
00	00	00	00	00	00	00	00	00	00	00	00	00	00	00

```
C:\Users\I227638\Desktop\rao.asm

LIST P=16F877
#include <P16F877.INC>
BANKSEL TRISC
MOVLW 0xFF
MOVWF TRISC

BANKSEL PORTC

MOVWF PORTC, W
MOVWF 0x70
MOVWF PORTC, W
MOVWF 0x71

MOVWF 0x70, W
ADDWF 0x71, W
MOVWF 0x72

MOVWF 0x70, W
SUBWF 0x71, W
MOVWF 0x73

MOVWF 0x70, W
ANDLW 0xF0
MOVWF 0x74

MOVWF 0x70, W
ANDLW 0x0F
MOVWF 0x75

END
```

Q2

Files | **Symbols**

Simulation - [Untitled]

Asynch Pin / Register Actions | **Advanced Pin / Register** | **Clock Stimulus** | **Register**

File	Pin / SFR	Action	Width	Units	Comments / Message
>	RC0	Set High			
>	RC1	Set High			
>	RC2	Set High			
>	RC3	Set High			
>	RC4	Set High			
>	RC5	Set High			
>	RC6	Set High			
>	RC7	Set High			
>	RA3	Set Low			
>	RB0	Set Low			

```

CODE SEG
START
    BANKSEL TRISA
    CLRF TRISA
    BANKSEL TRISD
    CLRF TRISD
    MOVW B'11111111'
    MOVW TRISB
    BANKSEL INTCON
    BSF INTCON_3
    BSF INTCON_7

    BSF INTCON_5IE
    BSF INTCON_5INTF

    BANKSEL OPTION_REG
    BSF OPTION_REG_7
    BANKSEL PORTC

ONE
    MOVW 0x0A
    MOVW PORTC

    BSF PORTB_0
    GOTO ONE
    GOTO END
END
    
```

Build | **Version Control** | **Find in Files** | **MPLAB SIM**

Debug build of project 'D:\Whh mcp' started
Preprocessor symbol 'DEBUG' is defined
Thu Oct 17 14:01:10 2024

Make: The target 'D:\Whh\Untitled.o' is out of date
Executing "C:\Program Files (x86)\Microchip\MPASM" ...
Warning[205] D:\NEW FOLDER\UNTITLED.ASM 1
Warning[203] D:\NEW FOLDER\UNTITLED.ASM 10
Message[302] D:\NEW FOLDER\UNTITLED.ASM 1
Message[302] D:\NEW FOLDER\UNTITLED.ASM 1
Warning[205] D:\NEW FOLDER\UNTITLED.ASM 1
Warning[203] D:\NEW FOLDER\UNTITLED.ASM 15
Warning[203] D:\NEW FOLDER\UNTITLED.ASM 20
Warning[203] D:\NEW FOLDER\UNTITLED.ASM 20
Message[302] D:\NEW FOLDER\UNTITLED.ASM 2
Warning[205] D:\NEW FOLDER\UNTITLED.ASM 20
Warning[203] D:\NEW FOLDER\UNTITLED.ASM 30
Warning[203] D:\NEW FOLDER\UNTITLED.ASM 35
Warning[203] D:\NEW FOLDER\UNTITLED.ASM 36
Warning[205] D:\NEW FOLDER\UNTITLED.ASM 37
Loaded D:\New folder\Untitled.cod

Debug build of project 'D:\Whh mcp' succeeded.
Preprocessor symbol 'DEBUG' is defined
Thu Oct 17 14:01:12 2024

BUILD SUCCEEDED

