Pls add the variables r1 to r4 to “watch” for the answer of question 2 as it is where I stored the answer

(it should be displayed such as r4 – r3 – r2 – r1)

1. A) 0x003

B) 0x003

C) 0x78 + 0x37 = AF

Line20: C is 0, DC is 0, Z is 0, PD is 0, TO 1,

Convert 0xF0 to binary and 0x78 to Binary by nibble, then do OR on each bit

1111 0000 or 0111 1000 = 1111 1000

Carry bit is triggered after the DAW command where the Hexadecimal answer affected it.

Line25: C is 1, DC is 0, Z is 0, PD is 0, O 1

Convert 0xF8 to binary and 0xF8 to Binary by nibble, then do AND on each bit

1111 1000 AND 1111 1000 = 1111 1000

MOVLW 0x00 triggered the zero flag

Line30: C is 1, DC is 0, Z is 1, PD is 1, O 0

D)

DAW converts the value of AF, which resulted in a carry bit in MSB but at the same time generated the wrong value (expected value is 06) but instead we get 15 which toggled the overflow flag

WREG value: 0x15

Line22: C is 1, DC is 0, Z is 0, PD is 1, O 1

4 a) Address of Main : 000048 / 2 = 24

Goto main opcode: EF24 F000

(Address of bra command + 2 – target address) / 2 to get the bra op codes

(00005E – 00005C)/2 = 1

bn opcode: E601

(000062 – 00005E)/2 = 2

Bra opcode: D002

(00006C – 00006E)/2 = -1 (convert to 2s complement then back to hexa)

Bra opcode: DFFE

b) The point of the program is to look for the smallest value between all the given numbers.

c)

