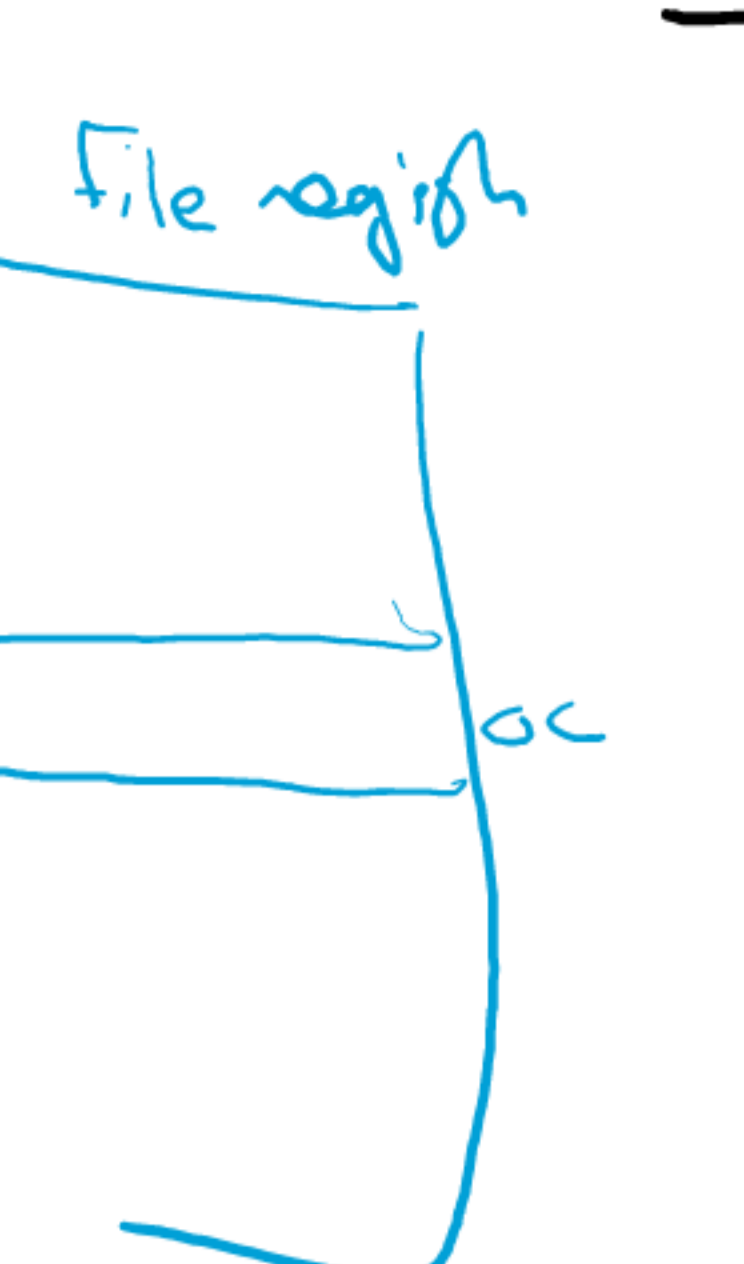


PIC16F84A

set of instructions
assembly



Assembly language

Lab report

(1)
(2)
(3)

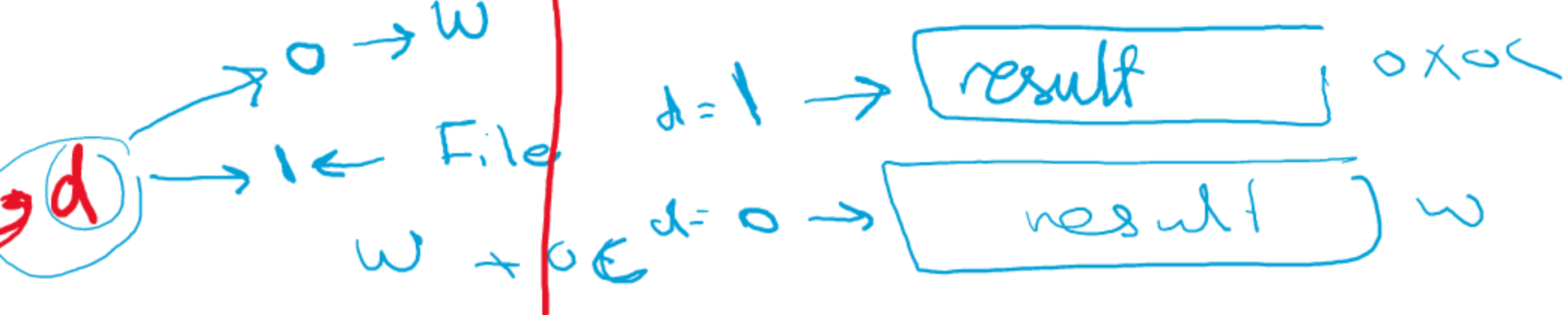
Sunday 6:30 pm

Control inst.

Bit-oriented inst.

Byte-oriented inst. "register"

ADDWF Fz, d



OPCODE File# d

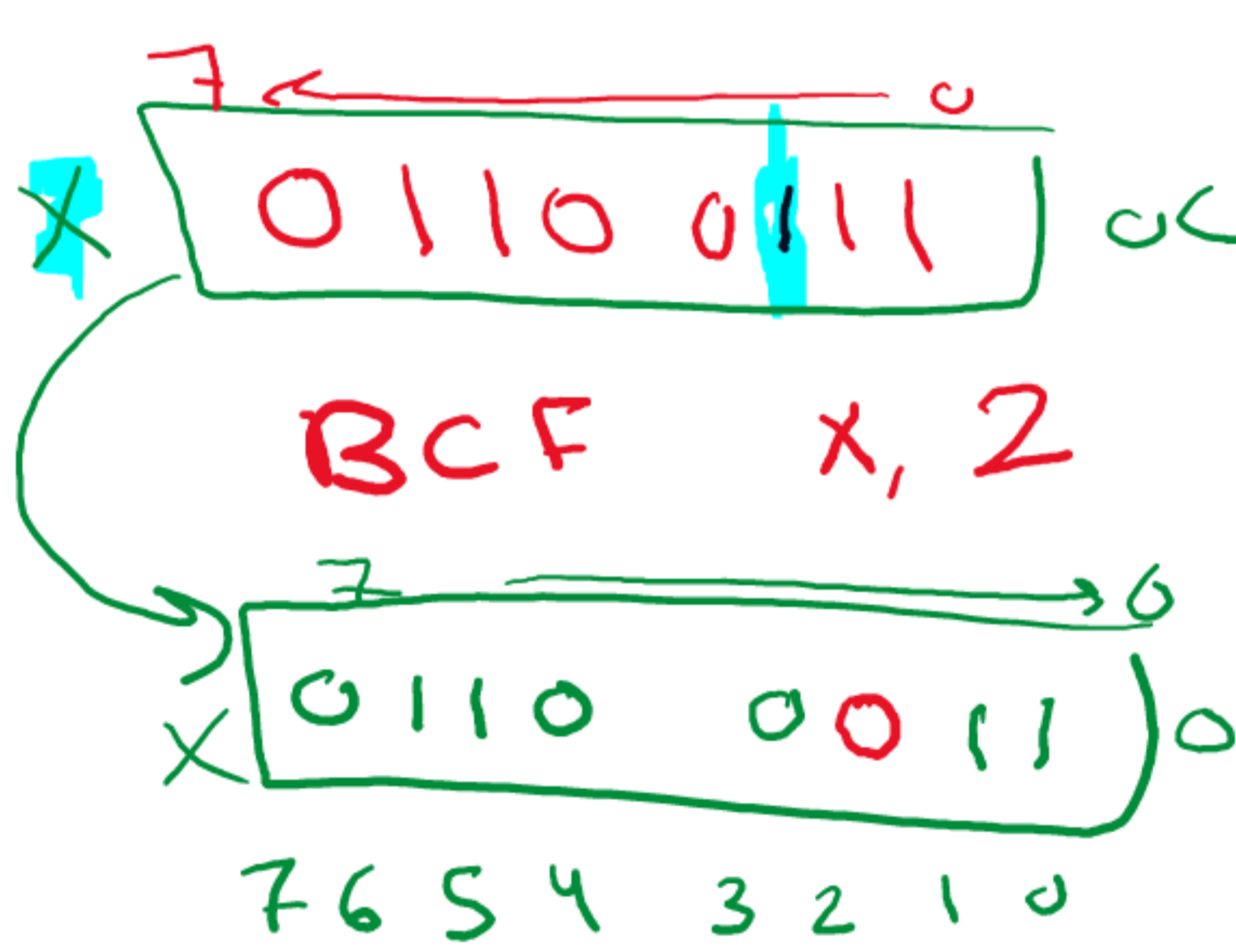
only works with one bit

Instruction set

BCF

BCF File bit

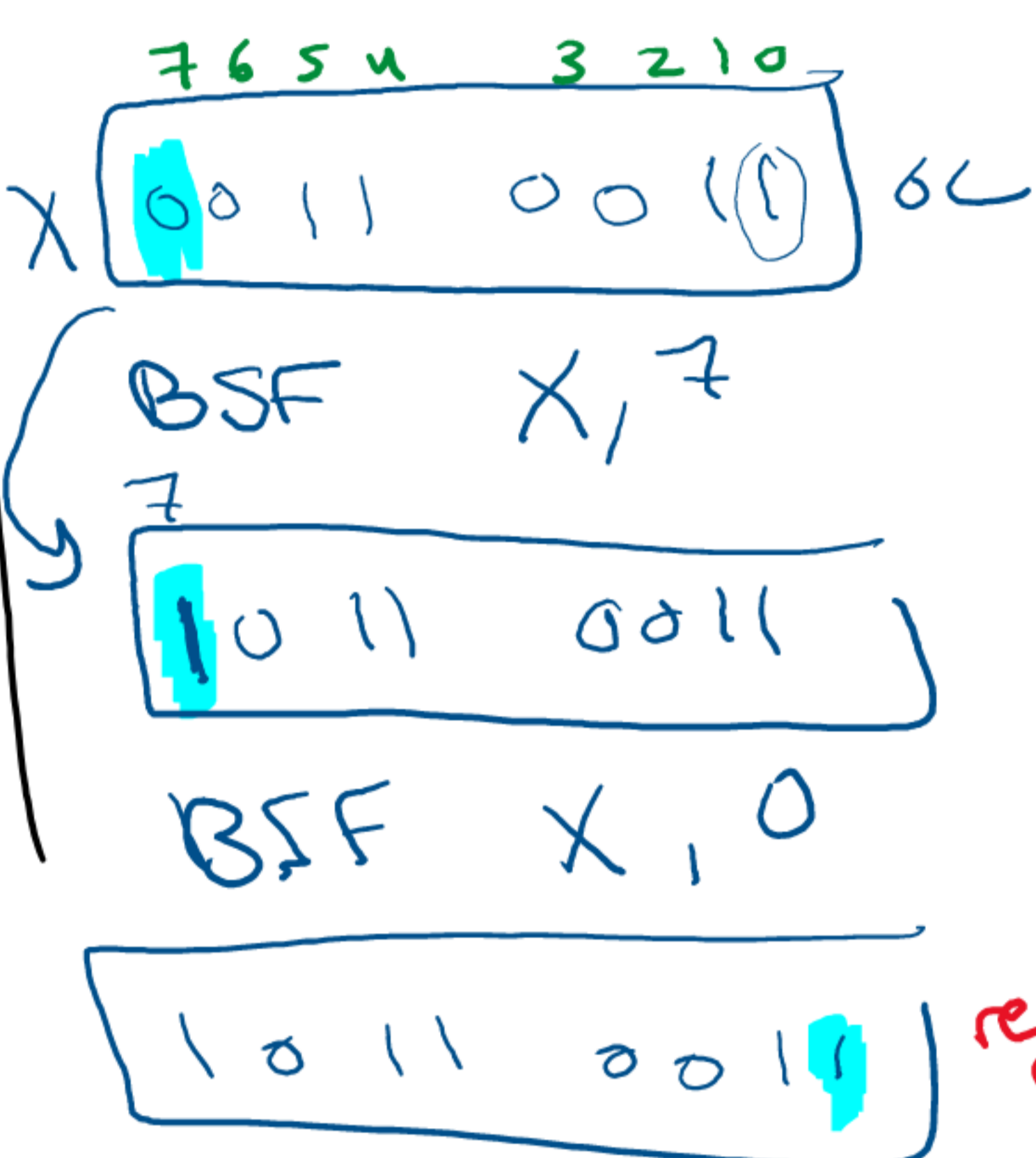
clears the bit



BSF

BSF File bit

sets the bit



BTFSS

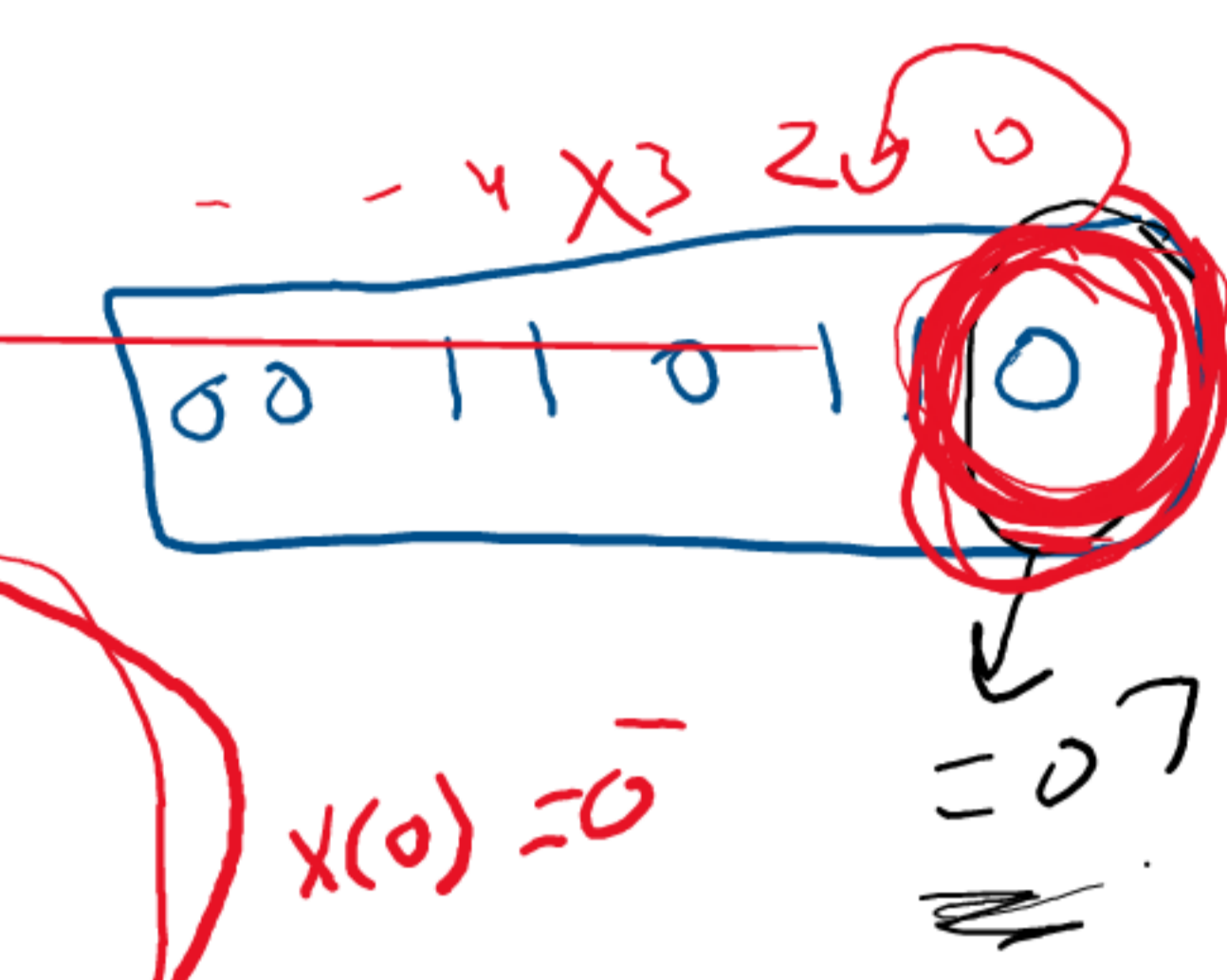
Bit test file register skip if set

BTFSS X, 0
if X(0)=1
BCF X, 1
BCF X, 7

BTFSC

Bit test file register skip if clear

BTFSC X, 0
if X(0)=0
BCF X, 0
BCF X, 5



Program 1

1 MovLW 0xBD

2 XORWF X, 0

3 BTFSS STATUS, Z

4 GoTo Yes 6

8 GoTo No 8

6 Yes BCF X, 0

6 No BSF X, 7

4 Final NOP

X 0xBD

W 0x00

X 01101101

W 01101101

Z flag 0

Z flag 1

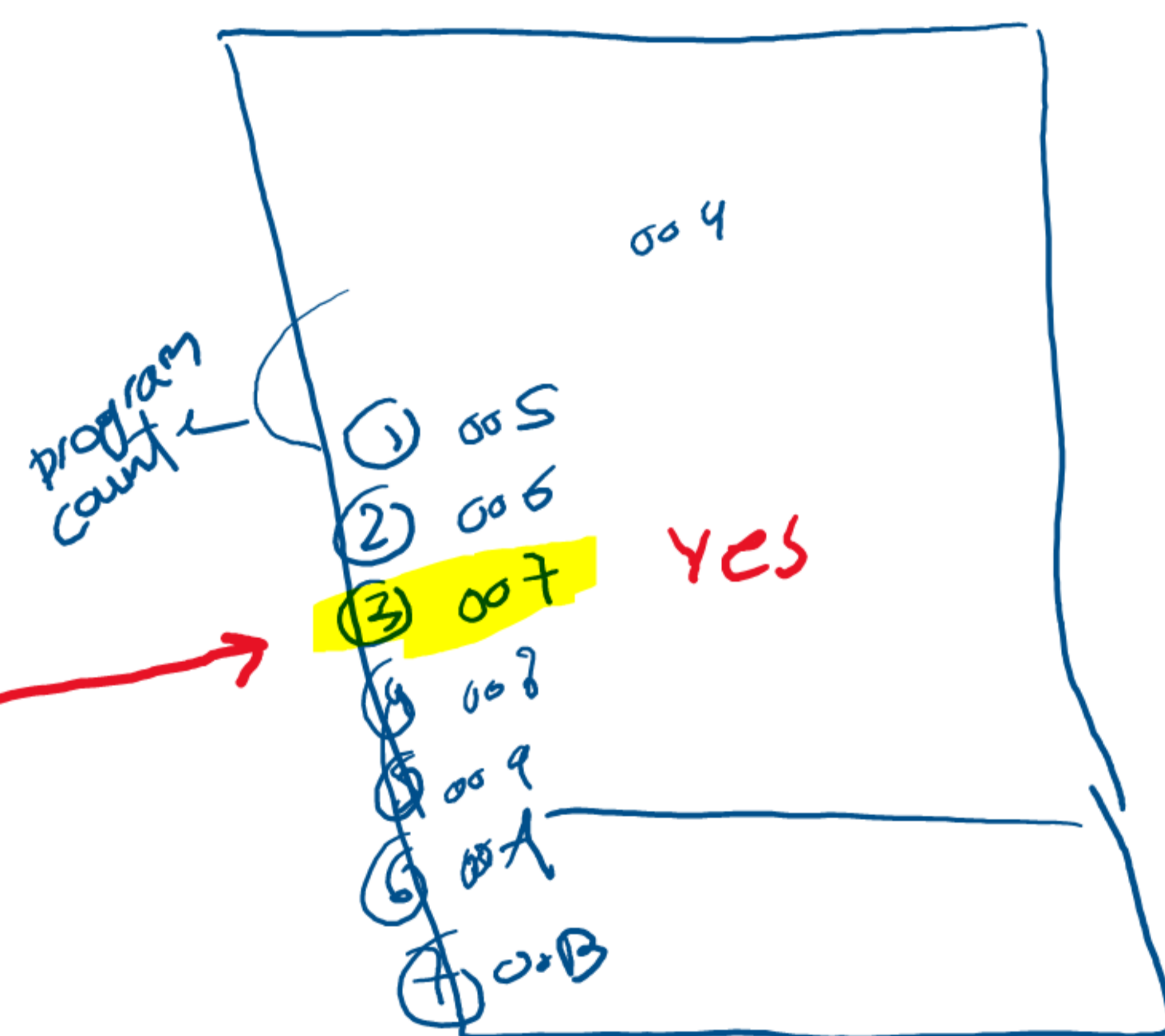
Z flag 0



"control instructions"

* GOTO Yes 6 "label"

Yes BCF X, 0



X EQU 0C

* DECFSZ

loops

Exercise 1

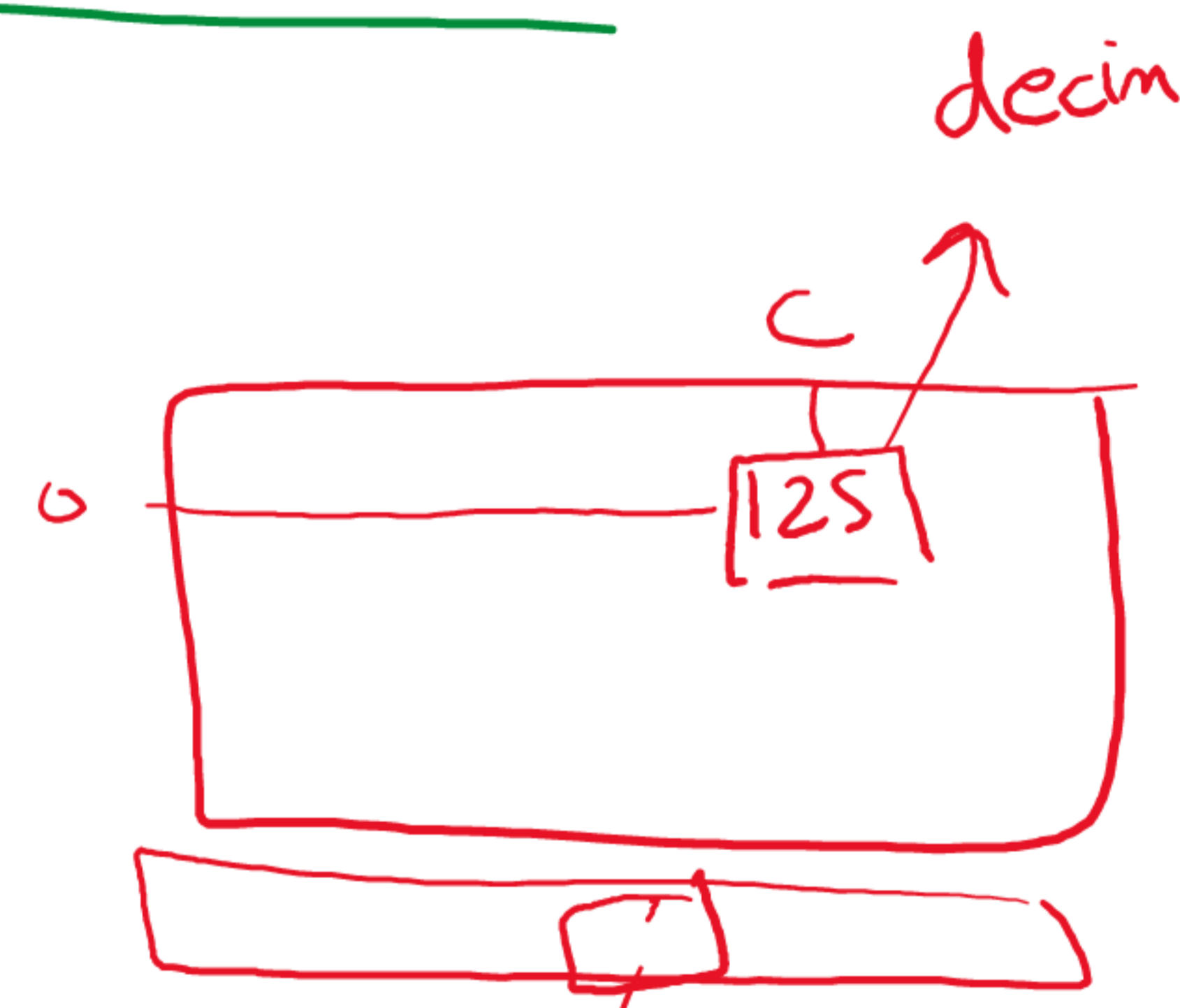
1 set X, Y, 0C and 0D
X EQU 0x0C
Y EQU 0x0D

2 Multiply X by 2

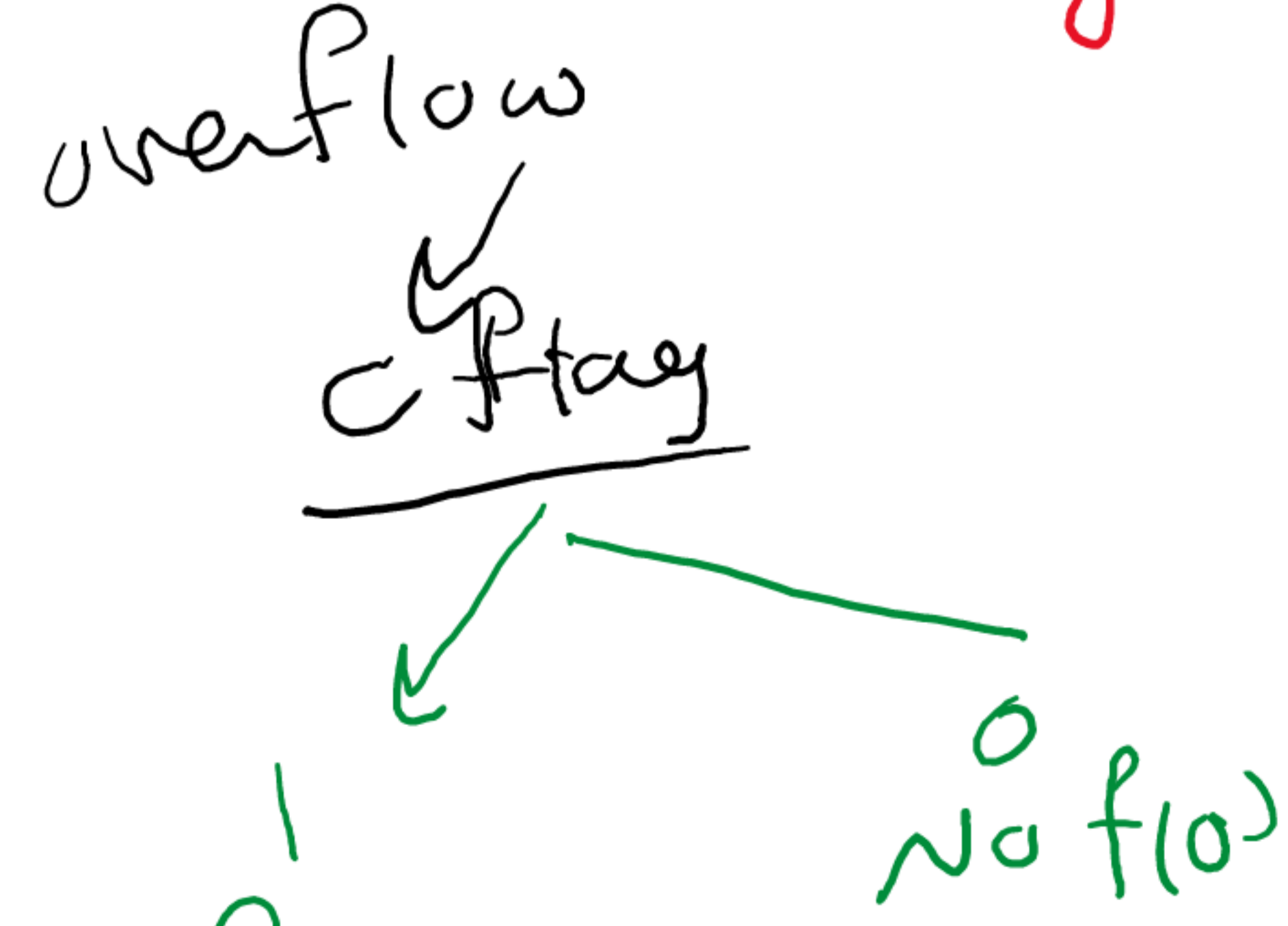
RLF X

3 BTFSS STATUS, C
GoTo NoFlow 2
GoTo Overflow 4

NoFlow CLRF Y
GoTo Final
overflow MOVWF Y
NOP



decimal
normal hex symbol



overflow

No flow

w = 0xFF

Final