

# CS 240

## Laboratory 9 Assignment

Due: Wednesday, before Lab.

Examine the following program, written in our lab MIPS-subset language (shown in hexadecimal format).

Add a comment to each instruction in the program, explaining what the instruction does (you may need to refer to the specification of the microcomputer, which was given as part of the Lab 7 assignment):

<u>Address</u>	<u>Instruction</u>
0:	5002
2:	5003
4:	1220
6:	0230
8:	2122
A:	8002

Does the program ever stop?

Record the values you store in registers and the addresses and values in data memory where you store values as you execute 18 instructions, beginning at address 0 (I have shown you the first 9 instructions):

<u>PC</u>	<u>R2</u>	<u>R3</u>	<u>DataMemoryAddress:</u>	<u>Value</u>
0	0			
2		0		
4			0	0
6		0		
8	1			
A				
4			1	1
6		1		
8	2			

2. Assume two values are previously stored in data memory at address 0 and 2. Write a new program which will subtract the value at address 2 from the value at address 0, and will store the result in address 4.