

Todd Wenker

CSE230 Homework #2

1. `int a = x, b = y, c = z`

`int d = a + b - c` is equivalent to:

`add $t0, $s0, $s1 # $s0 + $s1`

`sub $s3, $t0, $s2 # $t0 - $s2`

2. The first byte of a 4-byte word must be stored at a memory address that is divisible by 4 and `0x1000_C482` is not divisible by 4.

3.

Location	Data
2000	D
2004	4
2008	C
2012	3
2016	B
2020	2
2024	A
2028	1

`0x1A2B3C4D`

Location	Data
2000	D
2004	4
2008	C
2012	3
2016	B
2020	2
2024	A
2028	1

4. `lw $t0, -4($s0) #loads a into #st0`

`lw $t1, 8($s0) #loads c into $t1`

5. `addi $t0, $t0, -1000 # $t0 = $t0 - 1000`

6.

7. Labels are a way to order a program as it gives a name to a specific memory location that can be called

8. `.data`

`a: .word 100 # equivalent to int x = 100`

`b: .word -100 # int y = -100`

`ch: .byte $ # char ch = '$'`

`array: .word 3, 5, 7 # int array[3] = {3,5,7}`

9.

10.