CS224

Section No.: 05

Spring 2018

Lab No.: 01

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**1**. Write a MIPS program that

Creates an array of maximum size of 20 elements that asks the user first the number of elements and then enters the elements one by one.

Displays array contents

Reverses the array contents and displays the array (for example 1, 2, 3 becomes 3, 2, 1).

**2**. Write a MIPS program that

Implements the following expression without using div. If necessary use instructions other that we have seen in the class.

x= (c - d) % 2

**3**. Generate the object code (in hex) for the following la instructions. Show your work for the intermediate steps (please remember that la is a pseudo instruction and implemented by two instructions).

la $t1, a

la $t2, b

.....

.data

str: .asciiz "\nHello\n"

a: .word 1, 2, 3, 4

b: .word 1

**4**. Define the following terms by providing two examples for each of them.

a. Symbolic machine instruction

b. Machine instruction

c. Assembler directive

d. Pseudo instruction