[CSCI 231 - Fall 2019] Computer Systems and Organization
Department of Computer Science
School of Engineering and Digital Science

Lab Exercise 1

Submit your work to moodle before the due date

Write a program in MIPS assembly language that computes the first seven values of the ***fibonacci sequence**** and stores those values in memory. Initialize $F_0 = 0$ and $F_1 = 1$. After running your program, the data segment window should show all seven values. Hint: Please use an array to store those values. You can initialize your array as "***Fib:*** **.word 0 1** " (that means Fib[0] = 0, Fib[1] = 1) in the **.data** section, and to get the address of this array, use "*la $s0, Fib*" (that means $s0 = addr(Fib[0])) in the **.text** section. The seventh value of fibonacci sequence is $F_6 = 8$.

***** The sequence F_n of Fibonacci numbers is defined by the recurrence relation:
$F_n = F_{n-1} + F_{n-2}$, with $F_0 = 0$ and $F_1 = 1$.

NOTE:

1. Don't have to have the function name, loop or print using 'syscall' (which will be covered in the near future).
2. For lab related questions, students may ask questions to each session's TA.
3. Plagiarism check will be done after each submission.

Due Date: Exactly one 6 days later with **NO extension**
(e.g., for Lab1: Aug. 23 11 am ⇒ Aug. 29 11 am)

Output:

Data Segment

Address	Value (+0)	Value (+4)	Value (+8)	Value (+c)	Value (+10)	Value (+14)	Value (+18)	Value (+1c)
0x10010000	0x00000000	0x00000001	0x00000001	0x00000002	0x00000003	0x00000005	0x00000008	0x00000000