

## Computer Architecture (Spring 2022)

### Homework #2

1. On MARS, write a MIPS assembly program that generates Fibonacci sequence with the first  $n$  ( $n < 40$ ) numbers. Verify that the program is correct by simulation. The variable  $n$  is received from the console. The result sequence 0, 1, 1, 2, 3, 5, 8, 13, . . . is shown in the next line on the console with space to separate them.
2. Modify the I/O. Assume  $n$  is in the first location of the data segment. Put your output 0, 1, 1, 2, 3, 5, 8, 13, . . . . starting from the second location in the data segment.

Due day : Submit the text file with the two programs to e-learning by 23:55 on 4/9.

#### Notes :

1. You could use a register as a counter for the looping. And you might want to use *beq*, *bne*, *blt*, etc. to control your looping.
2. Do your homework on your own. You could have discussion with your classmates, but no copying is allowed.