Computer Organization (Spring 2025)

Homework #1

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 entered from the console. The result sequence 0, 1, 1, 2, 3, 5, 8, 13, . . . is shown on the console, each number in one line.

2. Modify the I/O. Assume *n* is in the first location of the data segment. Make your program write the 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 the deadline.

Hint：

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. No copying is allowed.