Indian Institute of Technology Kharagpur

AUTUMN Semester, 2018
COMPUTER SCIENCE AND ENGINEERING

Computer Organization Laboratory

Assignment-1: MIPS-32 Assembly Language Programming

Full Marks: 10

Time allowed: 3 hours

INSTRUCTIONS: ATTEMPT BOTH PROBLEMS. Make one submission per group of your source code on Moodle. Name your submitted source files following the format `Assgn_1_Prob_1_Grp_<Group_no>.s` (e.g. `Assgn_1_Prob_1_Grp_25.s`), etc. Inside each submitted file, there should be a clear header describing the assignment no., problem no., semester, group no., and names of group members. Liberally comment your code to improve its comprehensibility.

1. Write a complete MIPS program to collect a non-negative integer from the user, and then to calculate and display the sum of its digits. After the input number is collected from the user, there should be sanity checking to ensure that the integer is non-negative. (5 marks)

2. Write a complete MIPS program to collect a non-negative integer n from the user, and then to calculate and display the n-th Fibonacci Number. After the input number is collected from the user, there should be sanity checking to ensure that the integer is non-negative. (5 marks)