Indian Institute of Technology Kharagpur

AUTUMN Semester, 2019
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 two positive integers from the user, and then to calculate and display their **GCD by repeated subtraction. DO NOT USE ANY INTEGER DIVISION INSTRUCTION, EVEN IF IT IS AVAILABLE IN MIPS**. After the two input numbers are collected from the user, there should be sanity checking to ensure that the integers are positive. (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 value of 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)
