

Computer Organization and Structure

Homework #2
Due: 2005/11/17~18

Please write the following programs in MIPS assembly language.

1. Fibonacci Sequence:
write a program that uses a loop to calculate and print out the first ten values in the Fibonacci number sequence.
2. Pascal's Triangle:
write a program to compute and display the Pascal's triangle with given depth.

BONUS

Large-Number Calculator:

implement a calculator that can perform arithmetic operations for large signed integer numbers.

ex: $(-98765432109876543210 + (1234567890987654321 / 5712121)) * 1357924680$

Hint:

- a. Write four procedures for the four basic arithmetic operations: +, -, *, /
- b. Write a program that can input an expression and then use the above four procedures to evaluate this expression. The expression contains:
 - Signed integer numbers with at most 40 digits
 - Operators: +, -, *, /
 - Parentheses: ()

Submission & Grading

Please demo your programs to TAs during the deadline, on the demo day please

- a. hand-in your hardcopy document
- b. demo and explain the programs to TAs personally
- c. leave your source code as a copy on the computer

NOTE

- a. learn more on net, discuss with each other but write your own code
- b. any similar homework get ZERO points without mercy
(both the original and the copy)