

CSCI 2321 (Principles of Computer Design), Spring 2004

Homework 3

Assigned: February 6, 2004.

Due: February 13, 2004, at 5pm.

Credit: 40 points.

1 Problems

Do the following problems. You may write out your answers by hand or using a word processor or other program, but please submit hard copy, either in class or in my mailbox in the department office.

In addition, problems 3.6 and 3.11 require that you write fragments of MIPS assembler code. For these two problems, also submit your assembler code (two files, perhaps called `problem_3_6.s` and `problem_3_11.s`) by e-mail, to address `cs2321@cs.trinity.edu`. (The separate address makes it easier for me to collect homeworks and reduces the risk that yours will get lost in my regular mailbox.) Probably the simplest way is to use your regular mail program and send the two files as attachments. If that seems inconvenient, talk to me about other possible approaches.

1. (4 points) Do problem 3.1 on p. 197 of the textbook.
2. (6 points) Do problem 3.2 on p. 197 of the textbook.
3. (6 points) Do problem 3.6 on p. 198 of the textbook. *Note* that you must also submit your assembler source by e-mail, as described above.
4. (8 points) Do problem 3.7 on p. 198 of the textbook. Also write out the binary machine language for each instruction (i.e., the ones and zeros).
5. (16 points) Do problem 3.11 on p. 200 of the textbook. *Note* that you must also submit your assembler source by e-mail, as described above.