

CSCE 230, Fall 2009
Homework 6 (Chapter 2)

Due: Wednesday, 11/04/2009 before class (Hard copy or by Web Handin)

Problem 1 (Procedure Calling Conventions) [20%] Do the textbook Problems 2.21.4 through 2.21.6 for both parts (a) and (b).

Problem 2 (ARM vs. MIPS) [30%] We discussed the conditional-execution feature of ARM ISA in the Project Overview. This problem asks you to compare the ARM vs. MIPS in terms of their instruction architectural features; you should review Section 2.16 before answering the problem.

1. Do textbook Problems 2.35.1 and 2.35.2 for both parts (a) and (b).
2. Do textbook Problems 2.35.3 through 2.35.5 for only part (a).

Problem 3 (Process Synchronization) [50%] Do the textbook problems 2.29.1 through 2.29.6 for only part (a). (Note: This problem has a much higher level of difficulty and it requires a good understanding of how the linked pair of MIPS instructions, load linked (*ll*) and store conditional (*sc*), work together. If you have a doubt, feel free to contact me.