CS286-Computer Organization & Architecture
Possible Quiz Questions (Quiz #1)
on August 27th, 2018

Suggested solution for Question #24

The following is a list of possible questions for our quiz on August 27th. Some of the questions will not be asked in the quiz. All the questions that will appear in the quiz will appear exactly as shown below (however, numeric parameters may be changed). The quiz is closed textbook, closed notes and closed neighbors. Note that the questions, which did not appear in this quiz, still may appear in the exams. You will find a solution for these questions during lectures.

#24: What is the primary purpose of “assembly source code files”?

Writing programs in an assembly language allows human programmers to:

(a) Apply the best possible code optimizations to programs (programs that fit into small memory space or programs that run as fast as they can).

(b) Fix hard-to-fix software bugs (stack over flow, infinite loops, memory leaks, segmentation faults, and etc.), which are hard or even impossible to be fixed by programmers who do not have assembly programming skills.

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Note (this part is not necessary in your solution): Each assembly instruction corresponds to a particular machine code (one assembly instruction will be translated to one machine code). Since each machine code specifies exactly what a processor will perform and how a process will perform it, understanding assembly instructions actually means understanding a processor. Thus, writing programs