

# CS 140: Intro to Computer Science, Fall 2011

## Homework 9

Due (in class or via email) by 1pm on Friday, Dec. 2, 2011

Note that for this homework, you are welcome to use online sources (particularly for the ethics and computer security portions). Just be sure to cite ALL sources with the relevant problem.

1. List and describe three different types of computer attacks or malware.
2. What is the difference between discretionary access control and mandatory access control? List at least one operating system that uses each, and describe how it uses it.
3. What is a firewall, and when are they used?
4. Name 5 formatting specifications that can be established using HTML tags.
5. What is the difference between an applet and a java server page?
6. What is XML?
7. Create an HTML page for a web site that has each of the following features:
  - A centered title saying “My courses”.
  - An unordered list of the classes that you are taking this semester.
  - A link to <http://www.mathcs.slu.edu/> chambers that shows the text “Dr. Chamber’s webpage” on the screen (either with the list item for CS140 or by itself).
  - A picture of yourself (and you can make up the jpeg title - just so that it inserts the picture on the page).
  - An ordered list of at least 4 useful links that you use for classes. (I’d suggest wikipedia and google, based on my knowledge of what students use, but the details are up to you.)
8. Pick one of the following topics and write a 1-2 page essay discussing it. Please feel free to use any books or articles you wish; just make sure to provide a bibliography and cite your references. I expect at least 3 references (with at least 2 relevant facts per reference) to provide facts or back up your opinion in your essay, and remember that wikipedia does NOT count as a valid source on a research paper.

As always, please make sure to use a spell and grammar check before submitting your essays. You are also welcome to use the writing resource center on campus.

If you would prefer to discuss some other topics related to any area computer ethics, feel free to contact me to discuss it, and we can arrange a different topic.

- (a) How did the open source software movement begin, and how did it affect the development of commercial products? Do you believe the quality of open source software is likely to be higher or lower than commercial software. Provide examples to back up your opinion. (See the discussion at the end of chapter 7 for an overview of this topic.)
- (b) Do you think that medical companies have the right to use their databases to find correlations in data that has been “sanitized”, or stripped of all personal identifiers? Do the benefits of tracking and preventing disease outbreaks outweigh the loss of privacy and potential misuse of such data, if the data is not sanitized or if proper controls are not maintained? What cases have come up regarding these issues, and what have the courts decided in any relevant cases? (See the discussion at the end of chapter 13 for more background on this.)
- (c) If a person sends an email from a school, work, or even public computer, such as in a library, should that email be considered private? Does the institution owning the computer or email account have the right or even responsibility to inspect it? What information can you find about current laws regarding these issues? (See the discussion at the end of Chapter 4 for an overview of this topic.)
- (d) How did the controversies involving the original Napster dispute anticipate core issues in the MGM vs. Grokster case? How are the two issues similar, and how are they different? Do you think these cases were successful in settling the issue of digital file sharing?
- (e) With the advent of the internet, the government and various ISPs have an unprecedented ability to track people’s actions, from library books to online purchases to emails. Find out what types of monitoring are legally allowed, and what your options are for securing your privacy, and describe them. In your opinion, do technologies like Carnivore and other monitoring systems directly conflict with the 4th Amendment right to privacy, or are they a necessary evil in the current global setting? (See the discussion at the end of chapter 2 for an overview of this.)