

CPSC155a: Second Hour Exam
November 15, 2001

Instructions: Answer exactly six of the following seven questions. Do not answer all seven. If you do answer all seven, the first six answers in your blue book(s) will be graded, and the seventh will be ignored.

Note that 6 questions worth 16 points each add up to 96 points. Everyone gets 4 points for free.

Please remember to put your name and email address on the cover of your blue book(s).

Question 1. (16 Points) Privacy I

- (a) (4 Points) Give two types of information about web users that can be revealed by browsers.
- (b) (3 Points) True or False: Privacy laws tend to be sector-specific in the US and comprehensive in the European Union countries.
- (c) (9 Points) Give three of the Fair Information Principles proposed by the OECD (Organization for Economic Co-Operation and Development).

Question 2. (16 Points) B2B

- (a) (6 Points) Give 3 revenue models for B2B exchanges.
- (b) (4 Points) Give one major advantage and one major disadvantage of “participant ownership” of B2Bs.
- (c) (3 Points) Recall that XML has been developed to facilitate business interactions through *document exchange*. Identify three document types in the following business interactions.
Company X received a purchase order for 10 printers from Company Y. The model requested was no longer in stock, and so Company Y sent back its current catalog instead of an order confirmation and invoice.
- (d) (3 Points) Why is HTML inappropriate for the type of B2B document exchange facilitated by XML?

Question 3. (16 Points) C2C and Auctions

- (a) (4 Points) Why are auctions particularly appropriate in C2C e-commerce?
- (b) (4 Points) eBay’s basic C2C-auction service is technically commoditizable, in much the same way that many B2C retailers’ services are. Why is eBay so spectacularly successful at maintaining market share?
- (c) (4 Points) eBay’s Ascending-Bid Auction format is technically equivalent to a:
 - i. 2nd-price Vickrey auction
 - ii. 1st-price sealed-bid auction
 - iii. Dutch auction
 - iv. None of the above

- (d) (4 Points) Which of the following eBay services has not been extremely successful?
- i. Fixed-price sales (through the acquisition of Half.com)
 - ii. Sale of “distressed inventory” from technology companies
 - iii. Auction of art or luxury goods (the “eBay Premier” service)
 - iv. The “Buy it Now” addition to the basic C2C auctions

Question 4. (16 Points) Miscellaneous

- (a) (8 Points) For two points each, name the company mentioned in class that is best described by each of the following phrases.
- i. Leading provider of banner ads
 - ii. Archetypal online B2C retailer
 - iii. Leading provider of client and server software for streaming multimedia content over the Internet
 - iv. Leading provider of “trust services,” Internet security services, and domain registration
- (b) (4 Points) Give two specific B2B tasks for which Internet-based electronic marketplaces are considered particularly appropriate. (Note that “virtual aggregation,” the subject of question 4(c), is **not** a correct answer to this question 4(b).)
- (c) (4 Points) Recall that equalFooting is a horizontal B2B that obtains volume discounts for small businesses through “virtual aggregation.” Why is virtual aggregation a promising candidate for an Internet-based business?

Question 5. (16 Points) Web Services

- (a) (3 Points) Vast online databases can now be accessed by people through browser-based interfaces such as <http://quote.yahoo.com>. However, these databases are not as useful as they might be because:
- i. Computer programs must “mimic [human] users” in order to access them.
 - ii. Data type semantics are lost in the process of “screen scraping.”
 - iii. A lot of inefficiency and wasted computation results from computer programs’ screen scraping and mimicking humans.
 - iv. All of the above.
- (b) (5 Points) Web services may present entrepreneurial opportunities to turn freely accessible online data repositories into revenue-generating businesses. Give an example of such a data repository and a revenue-generating business that could be built from it.
- (c) (4 Points) Give two examples of web services that would be considered “foundation services” in the Microsoft.NET framework.

(d) (4 Points) The Microsoft.NET framework is frequently depicted as:

Devices (<i>e.g.</i> , PCs and cell phones)
User Experiences (<i>e.g.</i> , AOL and MSN)
Web Services (<i>e.g.</i> , authentication and data delivery.)
Servers (<i>e.g.</i> , data repositories and the systems that access them)

What Internet architectural principle is this framework architecture reminiscent of, and why is it appropriate for e-commerce?

Question 6. (16 Points) Privacy II

- (a) (6 Points) Give three roles that CPOs (Chief Privacy Officers) can play in companies that are concerned about privacy.
- (b) (4 Points) Give one major advantage and one major disadvantage of privacy seal programs.
- (c) (3 Points) P3P (the Platform for Privacy Preferences developed by the World Wide Web Consortium) provides:
 - i. Encryption and anonymity
 - ii. A machine-readable format in which privacy policies can be encoded.
 - iii. Enforcement mechanisms that ensure that web retailers comply with their posted policies.
 - iv. All of the above
- (d) (3 Points) True or False: If you are subpoenaed in a court case, the data stored about you on a server in the Internet has the same legal protection as the files on the computer in your home.

Question 7. (16 Points) Venture Capital

- (a) (8 Points) Consider Bob-surveillance.com, a start-up with first-round funding from one VC firm. In this first round, Bob (the founder) owns 100 shares, and the VC owns 100 shares; these are priced at \$10 per share. In a subsequent bridge round, Bob issues 10 additional shares, priced at \$1 per share. Under the terms of the first round of funding, the first-round VC has “anti-dilution protection.” Compute both the new total number of shares and the new number of shares owned by the first-round VC if these numbers are computed using a weighted ratchet. Compute both if they are obtained using a full ratchet.
- (b) (4 Points) Give two typical hurdles that a VC must overcome in the process of doing “due diligence” on a company in which it is considering making an investment.
- (c) (2 Points) True or False: A term sheet represents a binding commitment by a VC.
- (d) (2 Points) True or False: In general, start-up companies want their pre-money valuations to be large, and the first-round VCs with whom they are negotiating want these pre-money valuations to be small.