Chapter 9 - Privacy

**1. You have been asked to participate in developing the requirements for an**

**RFID-based identification card for students, faculty, and affiliates at a**

**university. First, list five to ten different uses of the card. Second, from that list**

**of uses, detail what data the card needs to broadcast to receivers that will**

**accomplish those uses. Third, identify uses that could be made of that data by**

**rogue receivers surreptitiously planted around the university campus. Which**

**rogue accesses threaten personal privacy? In what ways? What is the degree of**

**harm?**

**2. You have been asked to perform a similar exercise for a secret government**

**organization. List overt and covert uses of the card, list data that need to be**

**broadcast, and identify potential misuses of the data.**

**3. If you were supplying electronic voting machines for an election, what could**

**you do to violate individuals’ privacy rights? That is, suggest some not readily**

**apparent ways you could rig the machines to make it possible to determine after**

**the election who had voted for which candidates.**

**4. Suppose a telephone company maintained records on every telephone call it**

**handled, showing the calling phone number, the called phone number, and the**

**time, date, and duration of the call. What uses might the telephone company**

**make of those records? What uses might commercial marketers make? What**

**uses might a rival telephone company make? What uses might a government**

**make? Which of those uses violate individuals’ privacy rights?**

**5. Refer to the results of Turow’s survey on shopping on the Internet in Section**

**9.5. Many people thought certain common practices of Internet commerce were**

**illegal. Should a law be passed to make those illegal? Why or why not?**

**6. Discuss the algebra of authentication and its implications for privacy. That is,**

**assume a situation with two-factor authentication, and call the factors A and B.**

**Consider the four cases in which each one is strong or weak. What conclusions**

**would you draw about the results: weak A and weak B; weak A and strong B;**

**strong A and weak B; strong A and strong B? Does order matter? Does it matter**

**if both factors are of the same type (what you know, what you have, what you**

**are)? What happens if you add a third factor, C?**

**7. You have forgotten your password, so you click on “forgot my password” to**

**have a new password sent by email. Sometimes the site tells you what your**

**password was; other times, it sends you a new (usually temporary) password.**

**What are the privacy implications of each approach?**

**8. Present arguments for and against having a so-called aging function for**

**personal Internet data. That is, some postings might be automatically removed**

**after one month, others after one year, others after one decade. Is this a feasible**

**way to ensure privacy? Why or why not?**

**9. Is it ethical for a school to make videos of students using school-provided**

**computers outside of class? What ethical principles would justify such**

**monitoring? Would the school be similarly justified in recording all web**

**behavior? All keystrokes? Support your arguments with ethical principles, not**

**just personal opinion.**

**10. Describe a situation in which the source of information is more sensitive than the**

**information itself. Explain why the sum of sensitive data might also be sensitive.**

**11. Suggest a design for a filter that would distinguish queries revealing sensitive**

**data about the inquirer from those that do not reveal anything. What qualities might**

**indicate that a query was sensitive?**

**12. Find three websites that publish their privacy policies. Compare their policies.**

**Which offers the most privacy, and under what circumstances? Which offers the**

**least? How can privacy be improved at each site? How can you tell that the stated**

**privacy policy has been implemented completely and correctly?**

**13. Is legal protection an effective countermeasure for privacy intrusion? Explain the**

**difficulties or efficacy of using the law to provide privacy protection.**