



# Privacy, Security, and Ethics

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## Chapter 9

Computing  
Essentials 2014

# Competencies (Page 1 of 3)

- Identify the most significant concerns for effective implementation of computer technology.
- Discuss the primary privacy issues of accuracy, property, and access.
- Describe the impact of large databases, private networks, the Internet, and the Web on privacy.
- Discuss online identity and major laws on privacy.

# Competencies (Page 2 of 3)

- Discuss cybercrimes including creation of malicious programs such as viruses, worms, Trojan horse, and zombies as well as denial of service attacks, Internet scams, social networking risks, cyberbullying, rogue Wi-Fi hotspots, theft, and data manipulation.
- Detail ways to protect computer security including restricting access, encrypting data, anticipating disasters, and preventing data loss.

# Competencies (Page 3 of 3)

- Discuss computer ethics including copyright law, software piracy, digital rights management, the Digital Millennium Copyright Act, as well as plagiarism and ways to identify plagiarism.

# Introduction

- The ubiquitous use of computers and technology prompts some very important questions about the use of personal data and our right to privacy.
- This chapter covers issues related to the impact of technology on people and how to protect ourselves on the Web.





# People

- **Privacy** – What are the threats to personal privacy and how can we protect ourselves?
- **Security** – How can access to sensitive information be controlled and how can we secure hardware and software?
- **Ethics** – How do the actions of individual users and companies affect society?



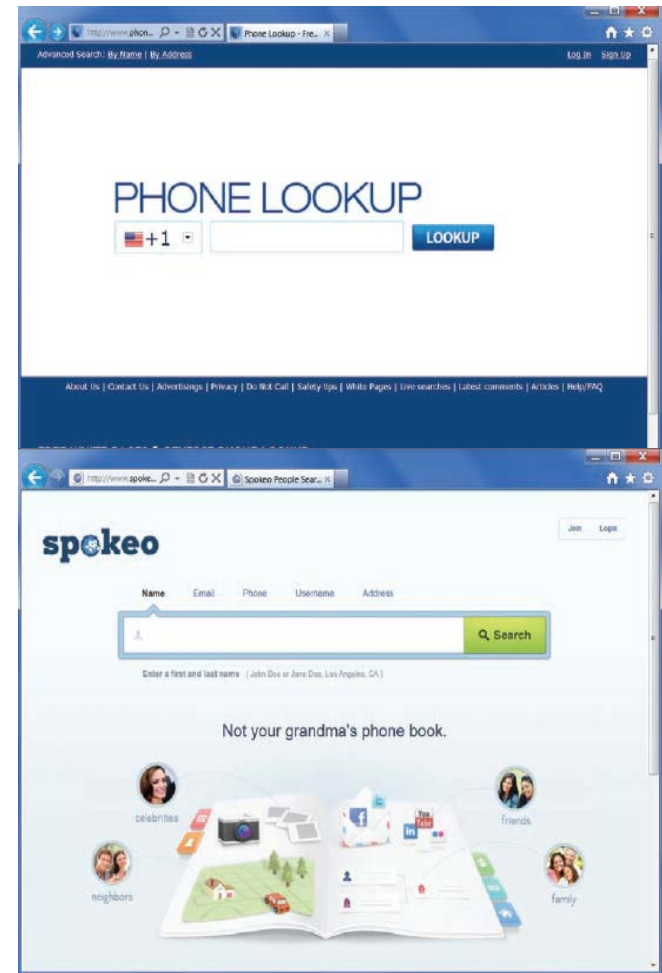


# Privacy

- Privacy – concerns the collection and use of data about individuals
- Three primary privacy issues:
  - Accuracy
  - Property
  - Access

# Large Databases (Page 1 of 2)

- Large organizations compile information about us.
- Federal government has over 2,000 databases
- Telephone companies
  - Reverse directory lists of calls we make
- Supermarkets
  - What we buy and when





# Large Databases (Page 2 of 2)

- Information resellers or information brokers
  - Collect and sell personal data
  - Electronic profiles easily created
- Personal information is a marketable commodity, which raises many issues:
  - Collecting public, but personally identifying information (e.g., Google's Street View)
  - Spreading information without personal consent, leading to identity theft
  - Spreading inaccurate information
    - Mistaken identity
    - Freedom of Information Act

# Private Networks

- Employers can monitor e-mail legally
  - 75 percent of all businesses search employees' electronic mail and computer files using snoopware
- A proposed law could prohibit this type of electronic monitoring or at least require the employer to notify the employee first





# Viewing and Blocking Cookies

- **Cookies**
  - Small pieces of information that are deposited on your hard disk from web sites you have visited
    - First-party cookies
    - Third-party cookies



# Online Identity

- The information that people voluntarily post about themselves online
- Archiving and search features of the Web make it available indefinitely
- Major Laws on Privacy
  - Gramm-Leach-Bliley Act
  - Health Insurance Portability and Accountability Act (HIPAA)
  - Family Educational Rights and Privacy Act (FERPA)



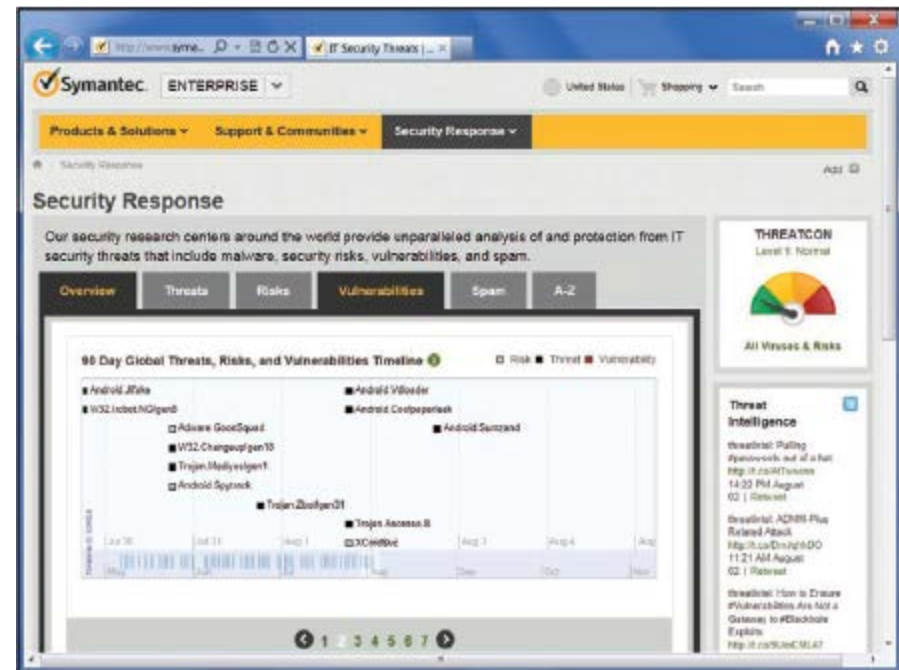
# Security

- **Cybercrime or computer crime is any offense that involves a computer and a network**
- **Hackers**
  - Gain unauthorized access



# Computer Crime (Page 1 of 3)

- Malicious Programs - Malware
  - Viruses
  - Worms
  - Trojan horse
  - Zombies
- Denial of Service
  - (DoS) attack



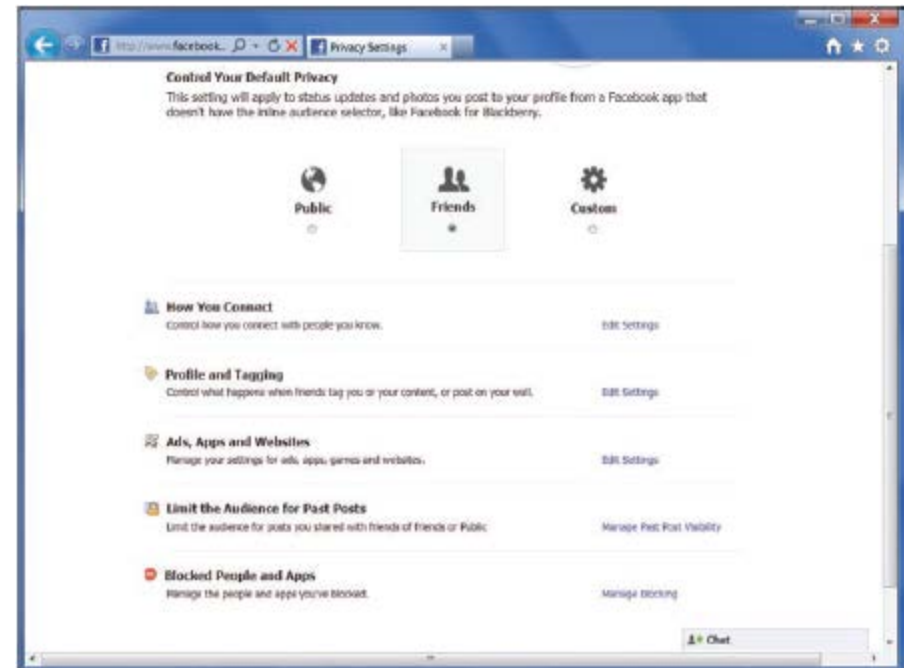
# Computer Crime (Page 2 of 3)

- Internet scams
  - Phishing

Type	Description
Identity theft	Individual(s) pose as ISPs, bank representatives, or government agencies requesting personal information. Once obtained, criminal(s) assume a person's identity for a variety of financial transactions.
Chain letter	Classic chain letter instructing recipient to send a nominal amount of money to each of five people on a list. The recipient removes the first name on the list, adds his or her name at the bottom, and mails the chain letter to five friends. This is also known as a pyramid scheme. Almost all chain letters are fraudulent and illegal.
Auction fraud	Merchandise is selected and payment is sent. Merchandise is never delivered.
Vacation prize	"Free" vacation has been awarded. Upon arrival at vacation destination, the accommodations are dreadful but can be upgraded for a fee.
Advance fee loans	Guaranteed low-rate loans available to almost anyone. After applicant provides personal loan-related information, the loan is granted subject to payment of an "insurance fee."

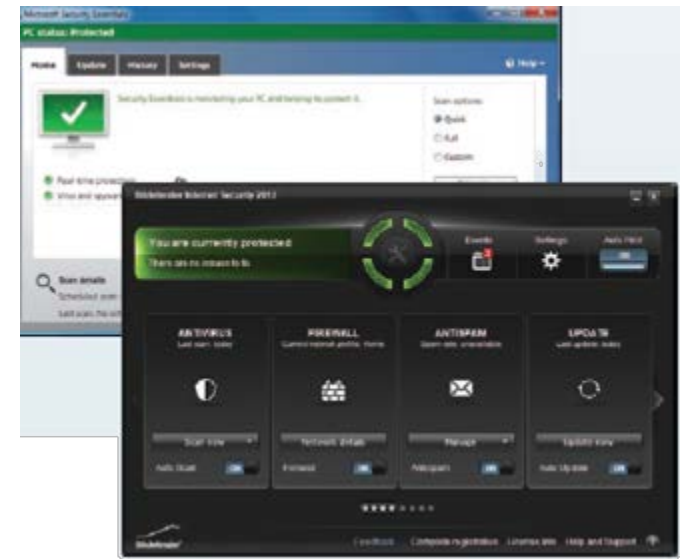
# Computer Crime (Page 3 of 3)

- Social networking risks
- Cyber-bullying
- Rogue Wi-Fi hotspots
- Theft
- Data manipulation
  - Computer Fraud and Abuse Act



# Making IT Work for You ~ Security Suites

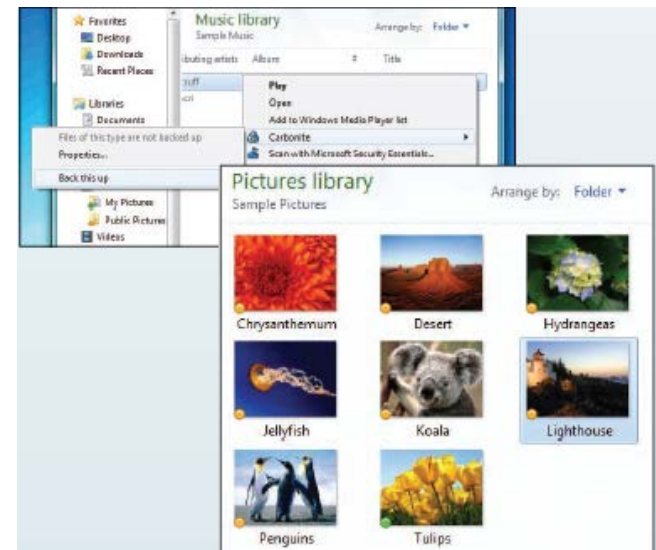
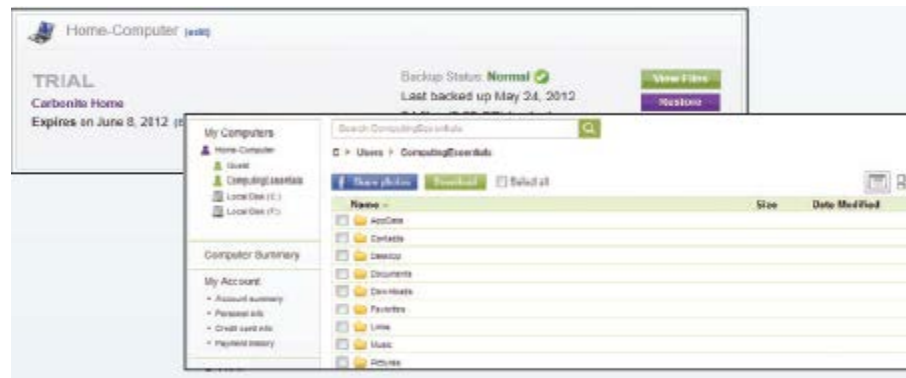
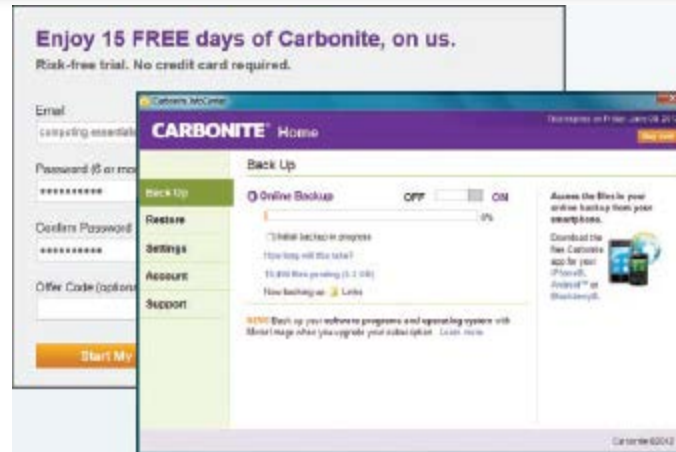
- Security Suites are software packages that include various utilities that help protect your computer from cybercrime.





# Making IT Work for You ~ Cloud-Based Backup

- Cloud-based backup services such as Carbonite provide cloud-based backup services.





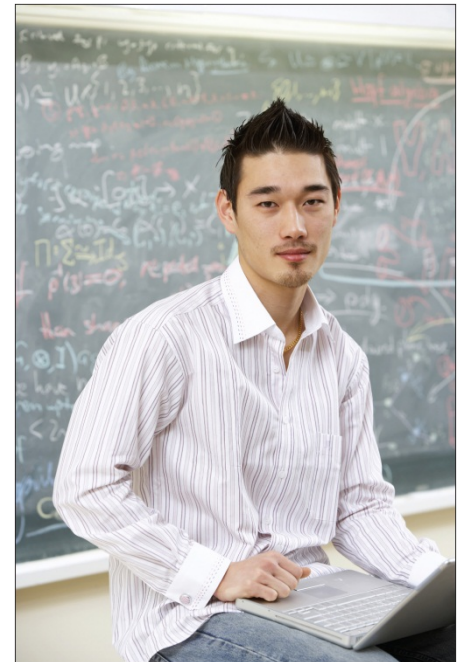


# Ethics

- **Standards of moral conduct**
- **Copyright**
  - Gives content creators the right to control the use and distribution of their work
  - Paintings, books, music, films, video games
- **Software piracy**
  - Unauthorized copying and distribution
  - Digital Millennium Copyright Act
  - Digital rights management (DRM)
- **Plagiarism**

# Careers in IT

- **IT Security Analysts maintain the security of a company's network, systems, and data.**
- **Must safeguard information systems against external threats**
- **Annual salary is usually from \$62,000 to \$101,000**
- **Demand for this position is expected to grow**



# A Look to the Future

- A Webcam on Every Corner
  - Images of public places are more accessible than ever before (e.g., Google Street View)
  - “Virtual site-seeing tours”
  - Public webcams continue to grow in popularity



# Open-Ended Questions (Page 1 of 3)

- Define privacy and discuss the impact of large databases, private networks, the Internet, and the Web.
- Define and discuss online identity and the major privacy laws.
- Define security. Define computer crime and the impact of malicious programs, including viruses, worms, Trojan horses, and zombies, as well as cyberbullying, denial of service attacks, Internet scams, social networking risks, rogue Wi-Fi hotspots, thefts, data manipulation, and other hazards.

# Open-Ended Questions (Page 2 of 2)

- Discuss ways to protect computer security including restricting access, encrypting data, anticipating disasters, and preventing data loss.
- Define ethics, and describe copyright law and plagiarism.