

# Privacy, Security, and Ethics

## Lecture 4

Fall Semester

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# People

Technology has had a very positive impact on people, but some of the impact could be negative.

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

# Privacy

- **Privacy** – concerns the collection and use of data about individuals

**There are three primary privacy issues:**

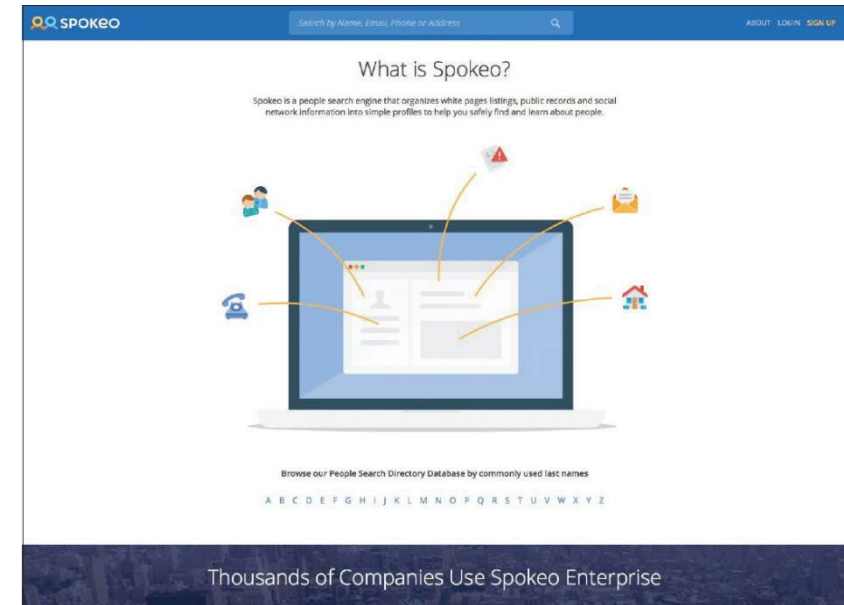
- 1) **Accuracy** – responsibility of those who collect data
  - Must be secure and correct
- 2) **Property** – relates to who owns the data
- 3) **Access** – responsibility of those who control data and use that data

# Large Databases

Large organizations compile information about us daily

**Big data** - ever growing volume of data

- Big Data is exploding and ever-growing
  - 90% of the data collected has been collected over the last 2 years

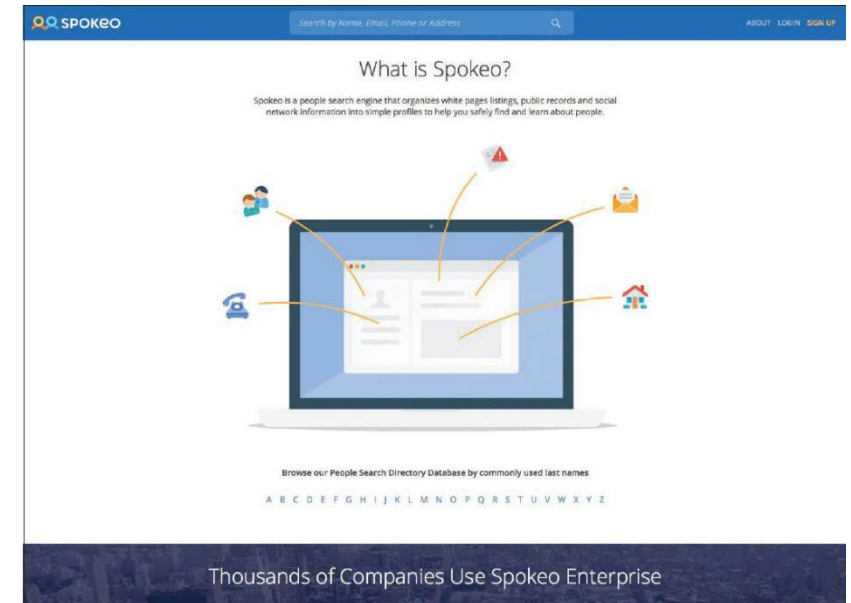


# Large Databases (Cont.)

Data collected and stored on citizens every day

**Collectors' companies or websites include :**

1. Telephone companies
2. Credit card companies
3. Supermarket scanners
4. Financial institutions
5. Search engines
6. Social networking sites



# Large Databases (Cont.)

- Information Resellers/Brokers
  - Collect and sell personal data
  - Using publicly available databases and in many cases nonpublic databases, information resellers create **electronic profiles**, or highly detailed and personalized descriptions of individuals.



# Electronic profiles

**(List three important issues related to electronic profiles)**

These electronic profiles can reveal more than you might wish to make public and have an impact beyond what you might imagine. This raises many important issues, including:

- 1) Collecting public, but personally identifying information (e.g., Google's Street View)
- 2) Spreading information without personal consent, leading to identity theft
- 3) Spreading inaccurate information

# Electronic profiles (Cont.)

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**1) Collecting public, but personally identifying information (e.g., Google's Street View)**





## Electronic profiles (Cont.)

These electronic profiles can reveal more than you might wish to make public and have an impact beyond what you might imagine. This raises many important issues, including:

**2) Spreading information without personal consent, leading to identity theft**

Example: collecting your shopping habits and sharing; or medical records, or driver's license number

## Electronic profiles (Cont.)

These electronic profiles can reveal more than you might wish to make public and have an impact beyond what you might imagine. This raises many important issues, including:

### **3) Spreading inaccurate information**

once you are tagged that photo can become a part of your electronic profile

- **Mistaken identity** – an electronic profile of one person is switched with another

# Freedom of Information Act

## **Freedom of Information Act**

- Entitlement to look at your records held by government agencies

# Private Networks

Many businesses search employees' electronic mail and computer files using **employee-monitoring software**. These programs record virtually everything you do on your computer.

- Employers can monitor e-mail
  - A proposed law could prohibit this type of electronic monitoring or at least require the employer to notify the employee first

# Concept check

- 1) Define privacy and list the three primary privacy issues.
- 2) Define privacy and explain the three primary privacy issues.
- 3) Every day, data is gathered about us and stored in large databases. Give six examples of collector companies or websites.
- 4) What is big data? Information resellers? Electronic profiles?
- 5) List three important issues related to electronic profiles.
- 6) What is mistaken identity?
- 7) What is the Freedom of Information Act?
- 8) What is employee-monitoring software?

# The Internet and the Web

- When browsing the web, critical information is stored on the hard drive in these locations:
  - 1) **History Files**
  - 2) **Temporary Internet Files**
    - Browser cache
  - 3) **Cookies**
  - 4) **Spyware**

# History Files and Temporary Internet Files

## **History Files**

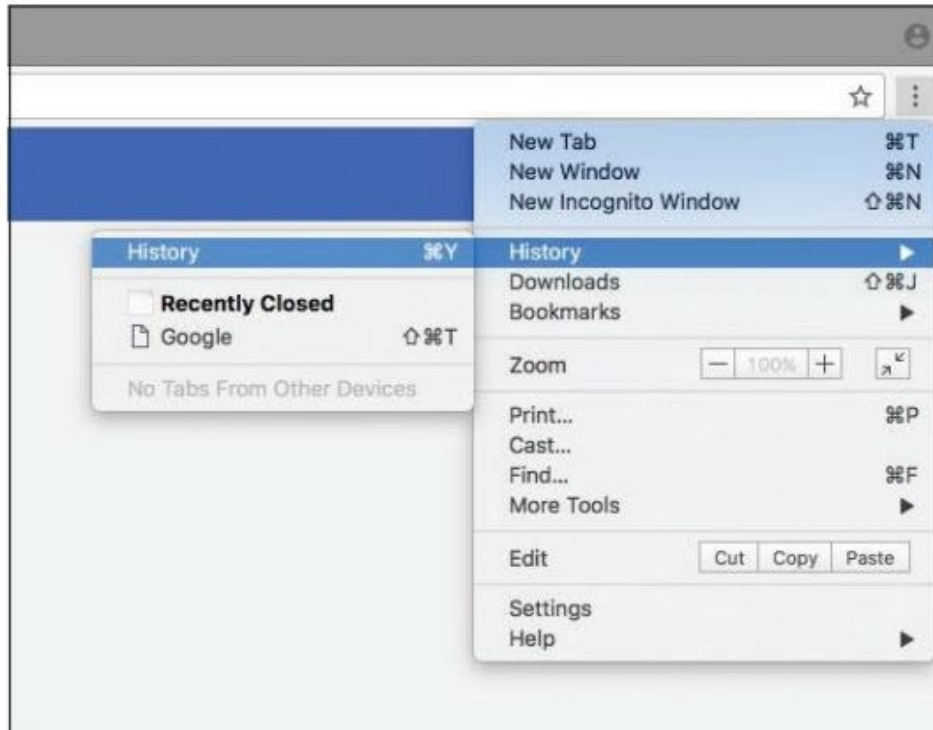
- History Files include locations or addresses of sites you have recently visited.

## **Temporary Internet Files / Browser Cache**

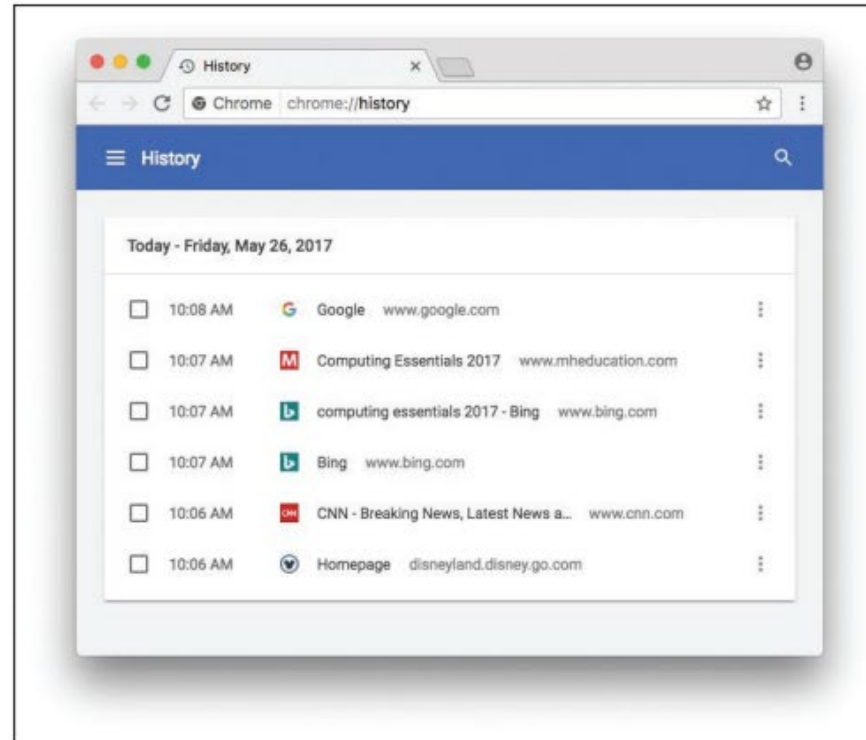
- Temporary Internet Files / Browser Cache saved files from visited website
- Temporary Internet Files / Browser Cache contain web page content and instructions for displaying this content.
- Temporary Internet Files / Browser Cache offers quick re-display when you return to the site

# History Files

- 1 In the top-right corner of the browser window, select the *Chrome Menu* button.



- 2 Select *History*.



**Figure.**  
**Viewing**  
**history files**



# Cookies

- **Cookies:** Small data files that are deposited on your hard disk from web sites you have visited
- Most cookies are **harmless** and are intended to provide customized service

# Cookies

There are **two** basic types of **cookies**:

**1) First-party cookies**

**2) Third-party cookies**

# Cookies

- 1) **First-party cookies** - is one that is generated (and then read) only by the website you are currently visiting.
  - Many websites use first-party cookies to store information about the current session, your general preferences, and your activity on the site. The intention of these cookies is to provide a personalized experience on a particular site.
  - For example, when you revisit a particular electronic commerce site, a previously deposited cookie can provide information so that you can be greeted by name and presented with sales and promotions that interest you.

# Cookies

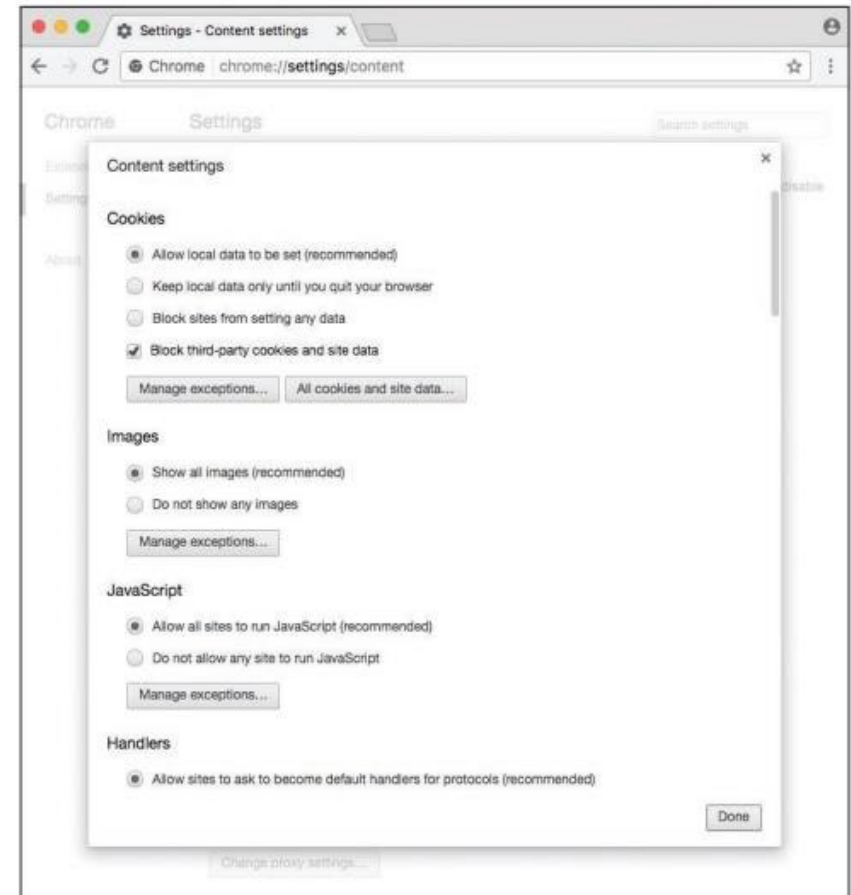
**2) Third-party cookies** - generated by an advertising company that is affiliated with the website you are currently visiting.

- **Third-party cookies** also known as **tracking cookies** that keep track of your Internet activities
- For example, suppose you visit four different websites that employ the same advertising agency. The first three sites are about cars, but the fourth is a search engine. When you visit the fourth site, you will likely see a car advertisement because your cookie showed that you had been visiting car-related websites

# Cookies

- 1 • Select the *Chrome Menu* button.
  - Choose *Settings*, then click *Show advanced settings*.
- 2 • Select the *Content Settings* button in the Privacy section.
  - Click the check box next to “Block third-party cookies and site data.”
  - Click *Done*.

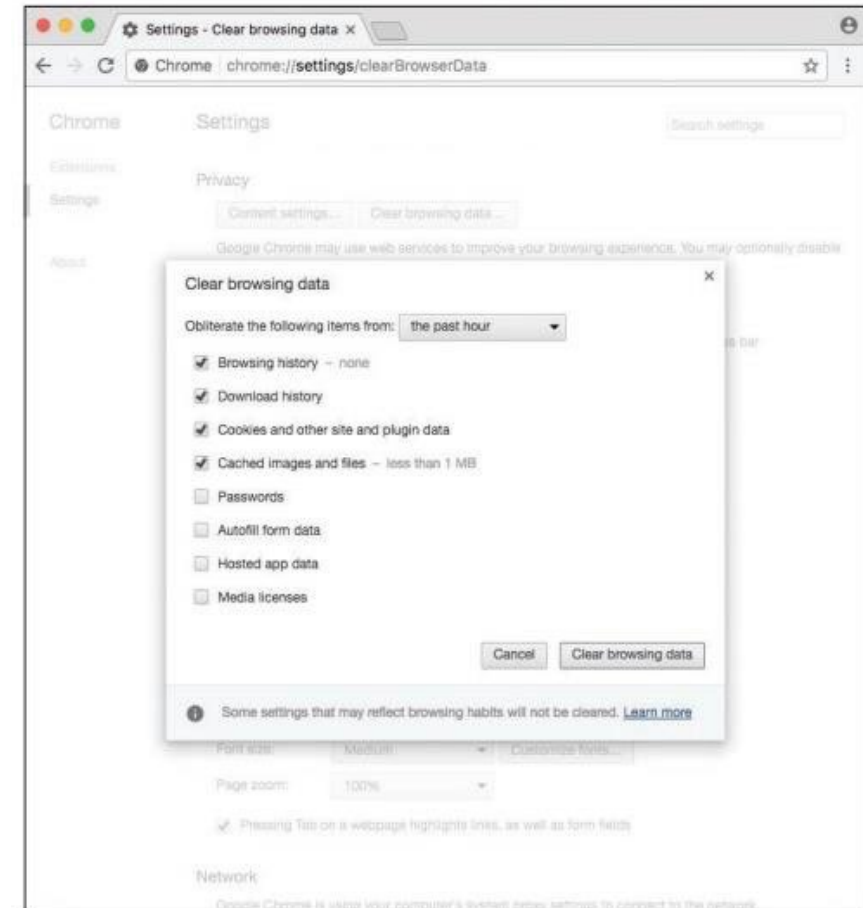
Figure. Blocking cookies



# Deleting browsing history

- 1 • Select the *Chrome Menu* button.
  - Choose *Settings* and then click *Show advanced settings*.
  - Select the *Content Settings* button in the *Privacy* section.
- 
- 2 • Select check boxes for items to be deleted.
  - Choose the *Clear browsing data* button.

**Figure. Deleting browsing history**



Thank You