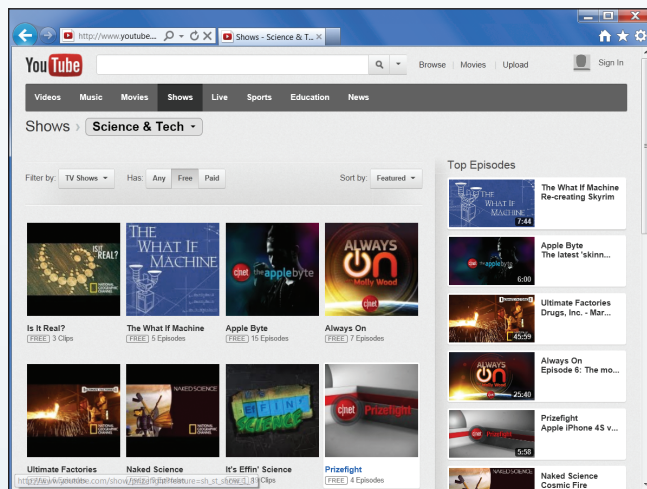


# VISUAL SUMMARY

## The Internet, the Web, and Electronic Commerce

### INTERNET AND WEB



#### Internet

Launched in 1969 with ARPANET, the Internet consists of the actual physical network.

#### Web

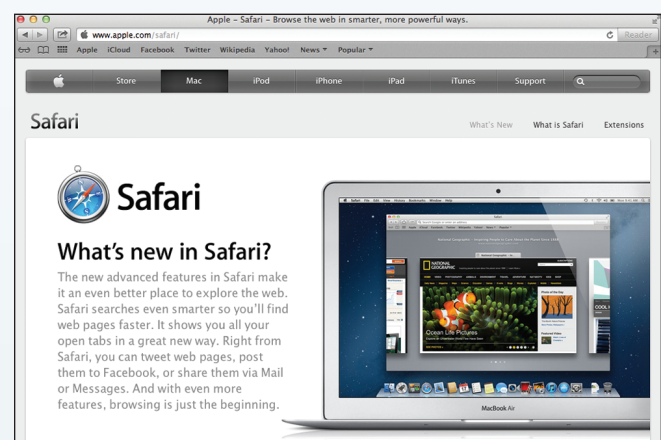
Introduced in 1991 at CERN, the web provides a multimedia interface to Internet resources. Three generations: Web 1.0 (existing information), Web 2.0 (content creation and social interaction), Web 3.0 (computer-generated information).

#### Common Uses

The most common uses of the Internet and the web include

- Communication—the most popular Internet activity.
- Shopping—one of the fastest-growing Internet activities.
- Searching—access libraries and local, national, and international news.
- Education—e-learning or taking online courses.
- Entertainment—music, movies, magazines, and computer games.

### ACCESS



Once connected to the Internet, your computer seemingly becomes an extension of a giant computer that branches all over the world.

#### Providers

Internet service providers are connected to the Internet, providing a path for individuals to access the Internet. Connection technologies include DSL, cable, and wireless modems.

#### Browsers

Browsers access the web allowing you to surf or explore. Some related terms are

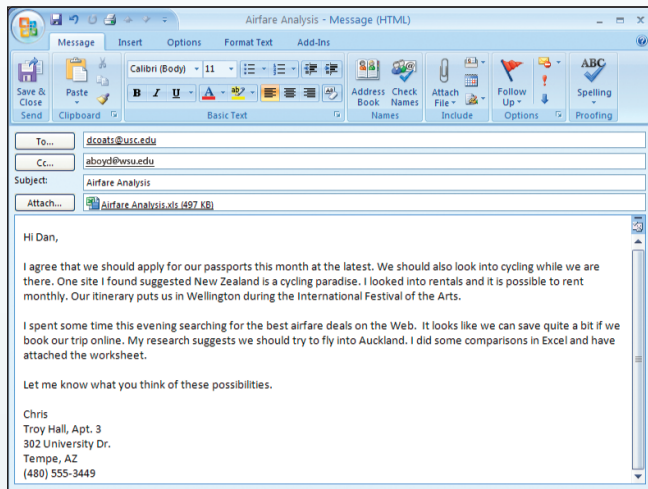
- URLs—locations or addresses to web resources; two parts are protocol and domain name; top-level domain (TLD) or web suffix identifies type of organization.
- HTML—commands to display web pages; hyperlinks (links) are connections.

Technologies providing interactive, animated websites include cascading style sheets, or CSS (to control the appearance of web pages); JavaScript (to trigger interactive features); AJAX (to create quick response interactive websites); and applets (to present animation, display graphics, provide interactive games, and more).

Mobile browsers run on portable devices.

To be a competent end user, you need to be aware of resources available on the Internet and web, to be able to access these resources, to effectively communicate electronically, to efficiently locate information, to understand electronic commerce, and to use web utilities.

## COMMUNICATION



### E-mail

E-mail (electronic mail) is the transmission of electronic messages. There are two basic types of e-mail accounts:

- **Client-based e-mail accounts** use e-mail clients installed on your computer.
- **Web-based e-mail accounts** use webmail clients located on the e-mail provider's computer. This is known as webmail.

A typical e-mail has three basic elements: **header** (including address, subject, and perhaps attachment), **message**, and **signature**.

**Spam** is unwanted and unsolicited e-mail that may include a *computer virus* or destructive programs often attached to unsolicited e-mail. **Spam blockers**, also known as **spam filters**, are programs that identify and eliminate spam.

### Messaging

While e-mail is the most widely used, two other messaging systems are

- **Text messaging**—sending short electronic messages between mobile devices.
- **Instant messaging (IM)**—supports live communication between friends.

## COMMUNICATION



### Social Networking

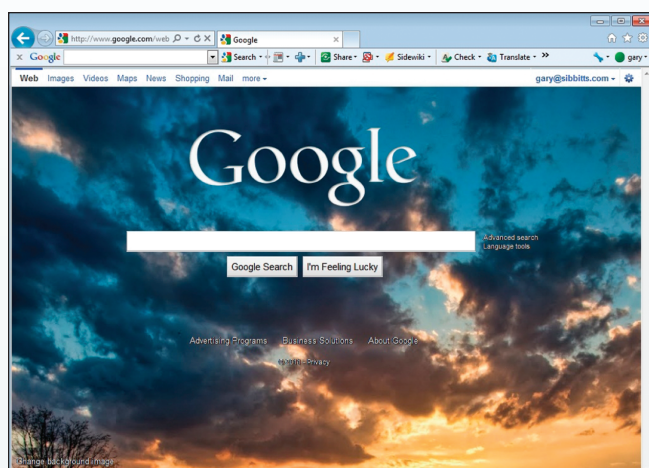
Social networks connect individuals to one another. Many sites support a variety of different activities. Three of the best known are **Facebook** (provides access to Facebook Profiles, Facebook Pages, and Facebook groups), **Google+** (provides access to Circles, Hangouts, and Sparks), and **LinkedIn**.

### Blogs, Webcasts, and Wikis

Other sites that help individuals communicate across the web are blogs, microblogs, webcasts, podcasts, and wikis.

- **Blogs (web logs)** and **microblogs** are online journals that support chronological postings. Unlike blogs that often contain detailed postings, microblogs publish short, concise sentences. **Twitter** is the most popular microblogging site.
- **Webcasts** and **podcasts** deliver audio, video, and other media content over the Internet. Unlike podcasts, webcasts use **streaming** technology.
- A **wiki** is a website designed to allow visitors to use their browsers to add, edit, or delete the site's content. Wikis are often used to support collaborative writing in which there is a community of interested contributors. **Wikipedia** is one of the most popular wikis.

## SEARCH TOOLS



Search services maintain huge databases relating to website content. Spiders are programs that update these databases.

### Search Engines

Search engines are specialized programs to help locate information. To use, enter a keyword or phrase and a list of hits or links to references is displayed.

### Specialized Search Engines

Specialized search engines focus on subject-specific websites.

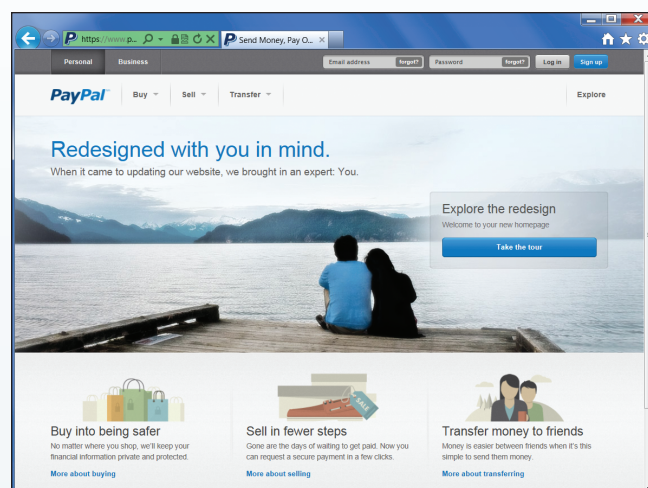
### Content Evaluation

To evaluate the accuracy of information found on the web, consider the following:

- **Authority.** Is the author an expert? Is the site official or does it present one individual's or organization's opinion.
- **Accuracy.** Has the information been critically reviewed? Does the site provide a method to report inaccurate information?
- **Objectivity.** Is the information factual or does the author have a bias? Does the author appear to have a personal agenda to convince or form a reader's opinion?
- **Currency.** Is the information up to date? Does the site specify when information is updated? Are the site's links operational?

Topic	Site
Environment	www.ecoearth.info
Fashion	www.shopstyle.com
History	www.historynet.com
Law	www.findlaw.com
Medicine	www.webmd.com

## ELECTRONIC COMMERCE



Electronic commerce, or e-commerce, is the buying and selling of goods over the Internet. Three basic types of e-commerce are **business-to-consumer**, **consumer-to-consumer**, and **business-to-business**.

- **Business-to-consumer (B2C)** commerce involves sales from business to the general public. It is the fastest-growing type. Three of the most widely used applications are online banking, financial trading, and shopping.
- **Consumer-to-consumer (C2C)** commerce involves sales between individuals, often as the electronic version of classified ads or an auction. **Web auctions** are similar to traditional auctions except buyers and sellers rarely, if ever, meet face to face.
- **Business-to-business (B2B)** commerce involves sales from one business to another, typically a manufacturer-supplier relationship.

### Security

The two greatest challenges for e-commerce are the development of

- Safe, secure payment methods. Two types are credit cards and **digital cash** (third party sells digital cash to buyers and redeems for sellers).
- Convenient ways to provide required information such as mailing addresses and credit card information.

Organization	Site
eBid	www.ebid.net
QuiBids	www.quibids.com
eBay	www.ebay.com
uBid	www.ubid.com



## CLOUD COMPUTING

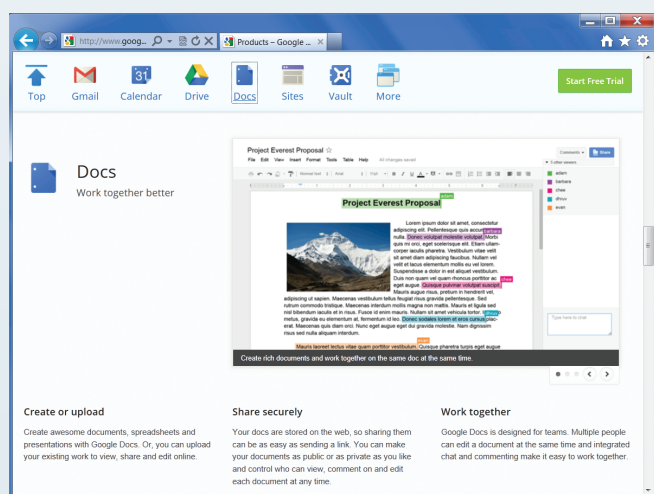


Cloud computing uses the Internet and the web to shift many computer activities from the user's computer to other computers on the Internet.

### Components

There are three basic components to cloud computing:

- Clients are corporations and end users who want access to data, programs, and storage.
- The Internet provides the connection between the clients and providers. Two critical factors are the speed and reliability of the user's access and the Internet's capability to provide safe and reliable access.
- Service providers are organizations with computers connected to the Internet that are willing to provide access to software, data, and storage.



## WEB UTILITIES

Plug-in	Source
Reader	<a href="http://get.adobe.com/reader">get.adobe.com/reader</a>
Flash Player	<a href="http://get.adobe.com/flashplayer">get.adobe.com/flashplayer</a>
QuickTime	<a href="http://www.apple.com/quicktime">www.apple.com/quicktime</a>
Silverlight	<a href="http://www.microsoft.com/silverlight">www.microsoft.com/silverlight</a>

Web utilities are specialized utility programs that make using the Internet and the web easier and safer.

### Plug-ins

Plug-ins are automatically loaded and operate as part of a browser. Many websites require specific plug-ins to fully experience their content. Some plug-ins are included in many of today's browsers; others must be installed.

### Filters

Filters are used by parents and organizations to block certain sites and to monitor use of the Internet and the web.

### File Transfer Utilities

File transfer utilities copy files to (downloading) and from (uploading) your computer. Three types are

- File transfer protocol (FTP) and secure file transfer protocol (SFTP) allow you to efficiently copy files across the Internet.
- Web-based file transfer services make use of a web browser to upload and download files.
- BitTorrent distributes file transfers across many different computers.

### Internet Security Suite

An Internet security suite is a collection of utility programs designed to protect your privacy and security on the Internet.

## CAREERS IN IT

Webmasters develop and maintain websites and web resources. Bachelor's or associate's degree in computer science or information systems and knowledge of common programming languages and web development software are required. Salary range is \$56,000 to \$80,000.



## KEY TERMS

address (32, 35)	Facebook Pages (37)	spam blocker (36)
Advanced Research Project Agency Network (ARPANET) (28)	Facebook Profile (37)	spam filter (36)
AJAX (33)	file transfer protocol (FTP) (50)	Sparks (37)
applets (33)	filter (49)	specialized search engine (43)
attachment (35)	friend (37)	spider (42)
BitTorrent (50)	Google Plus (37)	streaming (39)
blog (38)	Google+ (37)	subject (35)
browser (32)	Hangouts (37)	surf (32)
business-to-business (B2B) (45)	header (35)	texting (36)
business-to-consumer (B2C) (45)	hit (43)	text messaging (36)
cable (32)	hyperlink (33)	top-level domain (TLD) (32)
cascading style sheets (CSS) (33)	Hypertext Markup Language (HTML) (32)	Twitter (39)
Center for European Nuclear Research (CERN) (28)	instant messaging (IM) (37)	uniform resource locator (URL) (32)
Circles (37)	Internet (28)	uploading (49)
client-based e-mail account (35)	Internet security suite (50)	virus (36)
cloud computing (46)	Internet service provider (ISP) (32)	web (28)
consumer-to-consumer (C2C) (45)	JavaScript (33)	Web 1.0 (28)
digital cash (45)	link (33)	Web 2.0 (28)
domain name (32)	LinkedIn (38)	Web 3.0 (28)
downloading (49)	location (32)	web auction (45)
DSL (32)	message (35)	web-based e-mail account (35)
e-commerce (44)	microblog (38)	web-based file transfer services (50)
e-learning (29)	mobile browser (33)	webcasts (39)
electronic commerce (44)	online (28)	web log (38)
electronic mail (35)	plug-in (48)	webmail (35)
e-mail (35)	podcast (39)	webmail client (35)
e-mail client (35)	protocol (32)	webmaster (51)
Facebook (37)	search engine (43)	web page (33)
Facebook groups (37)	search service (42)	web suffix (32)
	secure file transfer protocol (SFTP) (50)	web utility (48)
	signature (35)	wiki (39)
	social networking (37)	Wikipedia (39)
	spam (36)	wireless modem (32)

To test your knowledge of these key terms with animated flash cards, visit our website at [www.computing2014.com](http://www.computing2014.com) and enter the keyword [terms2](#). Or use the free *Computing Essentials 2014* app.

## MULTIPLE CHOICE

Circle the correct answer.

1. The network that connects computers all over the world.
  - a. CERN
  - b. Internet
  - c. LAN
  - d. web
2. The rules for exchanging data between computers.
  - a. DSL
  - b. protocols
  - c. web
  - d. WWW
3. Client-based e-mail accounts require this special program to be installed on your computer.
  - a. e-mail client
  - b. hyperlink
  - c. JavaScript
  - d. utility
4. Communities of individuals who share a common interest typically create Facebook:
  - a. clients
  - b. groups
  - c. Pages
  - d. Profiles
5. E-mail that does not require an e-mail program installed on a user's computer is known as:
  - a. a blog
  - b. a podcast
  - c. webmail
  - d. a utility
6. A very well-known microblog.
  - a. LinkedIn
  - b. Google+
  - c. Twitter
  - d. Wikipedia
7. These programs continually look for new information and update search services' database programs.
  - a. filters
  - b. IM
  - c. spiders
  - d. wikis
8. Using a keyword, a search engine returns a list of related sites known as:
  - a. blogs
  - b. hits
  - c. podcasts
  - d. strikes
9. This is the Internet's equivalent to traditional cash.
  - a. digital cash
  - b. e-commerce
  - c. icash
  - d. Internet dollars
10. Using file transfer utility software, you can copy files to your computer from specially configured servers on the Internet. This is called:
  - a. downloading
  - b. filtering
  - c. blogging
  - d. uploading

For an interactive multiple-choice practice test, visit our website at [www.computing2014.com](http://www.computing2014.com) and enter the keyword [multiple2](#). Or use the free *Computing Essentials 2014* app.

## MATCHING

Match each numbered item with the most closely related lettered item. Write your answers in the spaces provided.

- |                    |   |
|--------------------|---|
| a. communicating   | ___ 1. The most popular Internet activity.  |
| b. C2C             | ___ 2. The most common way to access the Internet is through a(n) ____.                       |
| c. e-mail          | ___ 3. Transmission of electronic messages over the Internet.                                 |
| d. Internet        | ___ 4. Type of instant messaging service that supports a variety of different IM services.    |
| e. ISP             | ___ 5. The premier business-oriented social networking site.                                  |
| f. LinkedIn        | ___ 6. Another name for a blog.   |
| g. microblog       | ___ 7. Publishes short sentences that only take a few seconds to write.                       |
| h. search services | ___ 8. Maintain huge databases relating to information provided on the web and the Internet.  |
| i. universal       | ___ 9. Electronic commerce involving individuals selling to individuals.                      |
| j. web log         | ___ 10. The basic components of cloud computing are clients, service providers, and the ____. |

For an interactive matching practice test, visit our website at [www.computing2014.com](http://www.computing2014.com) and enter the keyword **matching2**. Or use the free *Computing Essentials 2014* app.

## OPEN-ENDED

On a separate sheet of paper, respond to each question or statement.

1. Discuss the Internet, including its origins, the three generations of the web, and the most common uses.
2. Describe how to access the Internet. What are providers? Define browsers and discuss URLs, HTML, CSS, JavaScript, AJAX, applets, and mobile browsers.
3. Discuss Internet communications including client-based and web-based e-mail, instant and text messaging, social networking, blogs, microblogs, webcasts, podcasts, and wikis.
4. Define search tools including search services. Discuss search engines and specialized search engines. Describe how to evaluate the content of a website.
5. Describe electronic commerce including business-to-consumer, consumer-to-consumer, and business-to-business e-commerce, and security.
6. What is cloud computing? Describe the three basic components of cloud computing.
7. What are web utilities? Discuss plug-ins, filters, file transfer utilities, and Internet security suites.