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Chapter 01: Information technology, the Internet, and You

Connectivity and the Mobile Internet

- network : communications system connecting two or more devices
- connectivity : share informations
- the forces of technology
  - cloud computing : computers on the Internet
  - wireless technology : change the way we communicate
  - the Internet of Things (IoT) : allow all types of devices to communicate

Data

- Document : created by word processors
- Worksheet : created by electronic spreadsheets to analyze things like budgets and to predict sales
- Database : created by database management programs to contain highly structured and organized data
- Presentation : created by presentation graphics programs to prepare presentation materials

Hardware

- Type of computers
  - supercomputers, mainframe computers, midrange computers, personal computers
  - Personal computers
- System Unit : houses most of the electronic components
- Input/Output : translate data into computer language/translate computer data into usable information
- Secondary Storage : hard disk, solid-state storage, optical disc
- Communications : communication devices, modems

People

- most important part of system
- direct / indirect contact

Career in IT

- technical writer
- computer support specialist
- webmaster
- software engineer
- computer technician
- network administrator

Software

- Application Software (human use)
  - end-user software
  - types of application software, specialized applications, apps
- = program
- convert data into system
- System software (used by computers)
  - enables application software to interact with the computer hardware
  - operating system, embedded operating system, standalone operating system, networking operating systems, utilities, antivirus program

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Chapter 02 : The Internet, the Web, and Electronic Commerce

Communication : most popular Internet activity

- Social Networking
  - connecting people and organizations that share a common interest or activity
  - Facebook, Google+, LinkedIn
- Blogs, Microblogs
- Webcasts, Podcasts, Wikis
- Search Tools
- Messaging
  - text messaging (SMS)
  - Multimedia Messaging Service (MMS)
- E-mail
  - SPAM, Computer viruses, CAN-SPAM Act, Spam blockers / spam filters
  - client based (e-mail) / web based (webmail)
  - header, message, signature
  - transmission of electronic messages over the Internet
- Content Evaluation (not everything is accurate)

Electronic Commerce

- Business to Consumer (B2C) : sale of product or service to general public
- Consumer to Consumer C2C : individual to individual
- Business to Business B2B : sale of a product or service from one business to another

Internet of Things (IoT)

- Continuing development of the Internet

Security

Internet :

- interconnected mesh of computers and data lines
- connect millions of people and organizations - launched in 1969
- physical network

Common uses

- communicating
- entertainment
- education or e-learning,
- shopping

Internet Service Provider (ISP)

- common way to access the Internet
- provide a path to access the Internet
- use telephone lines, cable, and/or wireless connections

Browsers

- provide access to web resources
- Apple Safari, Microsoft Edge, Google Chrome

URLs

- Uniform Resource Locator (https)
- protocols : rules for exchanging data
- domain name : where resource is located

Web Utilities

- Plug-Ins
  - automatically start and operate as part of you browser
  - Acrobat Reader, Flash Player
- Filters
  - block access to selected sites and can set time limits
- File Transfer Utilities
  - upload and download files to and from the Internet
  - File transfer protocol (FTP)
  - Secure file transfer protocol (SFTP)
  - Web-based file transfer services
  - Bit-Torrent
- Internet Security Suites
  - maintain your security and privacy while on the web
  - McAfee Internet Security, Symantec Norton Internet Security

Cloud Computing

Frees end-users from owning, maintaining, and storing software programs and data

- Clients (end-users)
- Service providers
- The Internet

Web :

- provides an easy-to-use interface to Internet resources
- a multimedia interface to the resources available on the Internet

- Top-Level Doman (TLD) / Web Suffix
  - .edu : Educational
  - .gov : Government
  - .com : Commercial
  - .mil : U.S. military
  - .net : Network
- HTML and Hyperlinks
  - Hypertext Markup Language : markup language for displaying web pages
  - Browsers interpret HTML commands : display document as a web page
  - Hyperlinks or links : connect to other web pages
- Interactive Web Sites
  - mobile Browsers
  - technologies used to provide highly interactive and animated websites

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Chapter 03 : Basic Application Software

- **Mobile Apps**
  - **App Stores**
    - provides access to mobile apps for downloads
- **Software Suites** : collection of separate application programs
  - **Office suites or office software suite / productivity suites** (Microsoft Office)
  - **Cloud suites or online office suites** (Google Docs)
  - **Specialized suites** (Corel Draw Graphics Suite X6)
  - **Utility suites** : designd to make computing easier and safer
- **Specialized Applications**
  - **Graphics Programs**
    - Web Authoring Programs (Blog) : the creation of a site design / document file displaying website's content
    - Desktop Publishing Programs (Page Layout Programs) : create brochures, newsletters, newspapers and textbooks
    - Image Editors (Photo Editors) : edit or modify digital photographs
    - Illustration Programs (Drawing programs) : create and edit vector images
    - Video Editors : edit videos to enhance quality and appearance
    - Video Game Design Software : organize thoughts, guide user through game design process
- **General Purpose Applications**
  - **Spreadsheet Programs**
    - organize, analyze, and graph numeric data
    - Microsoft Excel, Google Sheets
    - create sales forecast (worksheets) & analyze data (What-if Analysis)
  - **Word Processor Programs**
    - create text-based documents
    - Microsoft Word, Google Docs, etc
    - create flyer (grammar checker) & report (header or footer)
  - **Presentation Graphics Programs**
    - combine a variety of visual objects to create visually interesting presentations
    - Microsoft PowerPoint, Google Slides
    - create presentation (animation, templates)
  - **Database Management Systems (DBMS)**
    - a collection of related data
    - Microsoft Access, Apple FileMaker)
    - create database (table, form)
- Careers In IT
  - **Software Engineers**
    - **Attributes**
      - good communication and analytical skills
      - programming experience
      - detail oriented
      - web application experience