Software: Telling the Machine What to Do

• Software - the planned, step-by-step set of instructions required to turn data into information.
• Divided principally into systems and applications.
Applications Software

- Programs designed to perform specific tasks and functions
- Often found in the mass market as
  - packaged software or
  - commercial software

But What Would I Use It For?

- Office Applications
- Games
- Hobbies
- Surfing the Internet
Acquiring Software

Freeware - authorized software released for free, placing it in the public domain

Commercial - copyrighted software released for price of purchase
- This software may be pirated, or used illegally.

Some Task-Oriented Software

• Most commonly known in the workplace as productivity software.
• Intended for specific tasks described in the following slides:
Word Processing/Desktop Publishing

• Most commonly used productivity software
• Used to create memos, reports, minutes of meetings, other documents.
• Can create, edit, format, store, and print text and graphics from one document.

Electronic Spreadsheets

• Just like a manual spreadsheet except the computer does the repetitive work
• Allows the ability to ask mathematical “What ifs?” and then see the results on the computer before making costly decisions.
Database Management

- Software used for the management of a collection of interrelated facts.
- Useful for professions keeping record of large numbers of related facts (i.e. Billing, crime detection).

Graphics

- Software used to create visual images such as:
  - drawings,
  - graphs,
  - charts,
  - maps and
  - many more.
Communications

- Communications is now mostly via the Internet, but
- Many businesses have long been heavy users of communications, among them:
  - weather forecasters
  - stock brokers
  - the government

Office Suites

- Typically include:
  - word processing,
  - spreadsheet,
  - database
- Modern suites are feature-laden and require substantial hard disk space
Business Software

- Companies often use a mix of off-the-shelf and custom-made software.
- An aircraft company may use spreadsheets heavily, but they will not find an off-the-shelf package for designing planes.

Vertical Market Software

Designed to serve the specific needs of a group of similar businesses, such as auto repair.
Software for Workgroups

- Groupware (collaborative software) lets a group of people share information.
- These programs may include email, scheduling and database technology.

Getting Software Help at Work

The company Help Desk may provide assistance with applications, software selection, and network and hardware repair.
Software for a Small Business

- Accounting
- Writing and advertising
- Customer service
- Keeping up and making contacts
- Making sales pitches

Companies may use accounting software ranging from a simple spreadsheet to a specialized accounting package that prints checks and has payroll capability.
Writing and Advertising

Heavy users of:
- Word processing
- Desktop publishing

Customer Service

Customer service companies need databases to store:
- Addresses
- purchase preferences
- Example: a pet store.
Keeping up and Making Contacts

Business connections are available from many sites on the Internet.

Making Sales Pitches

Presentation software can help you create colorful demonstrations.
Incentives to pirate:
• Illegally copied software is identical to the original and works just as well
• Illegally copied software may be valued at several hundreds of dollars

Companies may be at risk for litigation if an employee installs illegally copied software on his office computer.
Why Those Extra Copies?

Legal copying includes making an archive copy in case of disk failure.

Operating Systems: Hidden Software

- Operating systems tell computer hardware what to do.
- An operating system is a set of programs that lies between applications software and the computer hardware.
The most important OS program is the supervisor program.
The supervisor program loads other operating programs into memory as needed.

Functions of an OS

An OS has 3 main functions:
- Manage computer resources
- Establish a user interface
- Execute and provide services for applications software
Operating Systems for Personal Computers

- Software is often written for one particular OS, but
- Popular software is available for more than one OS:
  - Windows
  - Mac OS

Microsoft Windows

Windows is a popular OS that is often pre-installed on computers with Intel processors.
A Windows Overview

Windows includes:
• Browsing capabilities
• Support for state-of-the-art hardware
• Support for very large disk drives
• TV viewer and broadcast ability
• Wizards

Windows NT

Windows NT ("new technology") is a more robust, heavy duty version designed for use with networked computers in a business.
Windows 2000

Windows 2000 will merge features of both the current home user version and Windows NT. Windows 2000 will use ordinary language, rather than menus.

Computers and People

Essential personnel required to run large computer systems include:
- Data entry operators
- Computer Operators
- Programmers
- Systems Analysts
- Network Managers
Conclusion

- We have described computer software and operating systems in general terms.
- Subsequent chapters will describe computer hardware in more detail.