

Computer Basics Programs

Programming

- All of the information that travels through your computer is stored on bits as either an on or off signal.
- Using bits and bytes in different combinations to represent a code is known as **programming**.
- These codes allow the computer to understand instructions.
- **Computer programmers** are people who write these codes to create programs using **programming languages** that are easier than remembering all the bit or byte combinations.
- Programming allows people and computers to communicate more easily.

Examples of Programming Languages

C++ **BASIC**
QBasic
Perl **HTML**
 Pascal
Javascript

Computer Programs

- A **program** is a set of instructions that tells the computer how to perform a specific task.
- For example, your favorite computer game is a program.



Computer Programs



- In order for your computer to know how to play that game, you must first **install** the program from the game software - usually a CD.
- Installing the program means that you are copying the program or instructions that are stored on the CD on to your computer's hard drive.
- Programs can also be downloaded from the internet directly to your hard drive.

Computer Programs

- Many programs (especially games) are very large and would take up lots of memory space on your hard drive.
- To keep that from happening, these programs are designed to only copy part of the program onto your computer. The rest of the program stays on the software. The program cannot be run from your computer unless you have the disk in the disk drive so that RAM can read the rest of the program from it.



Computer Programs



- Other programs install completely on your hard drive, so that they can be used without running the CD.
- This is very helpful with programs that are designed to help the user perform a specific task, such as typing a letter or creating a birthday card.
- Having the program run without the CD, frees up the CD-ROM drive in case.

Types of Programs

- There are many different types of programs for the computer.
- They are grouped according to the tasks that they perform.
- Here are some very common types of programs and some examples of their uses:
 - Word processing - letter writing, essays, writing stories
 - Database - address books, mailing lists
 - Spreadsheets - storing financial information
 - Research - encyclopedias, informational programs
 - Entertainment - games, music/video programs
 - Education - skill practice games, tutorials, how-to programs
 - Desktop Publishing - creating birthday cards, newsletters, etc.

Programs



- Programs do much of the work for us, when we perform tasks on the computer. The program instructs the computer in a language that it understands.
- Think of how hard it would be to dictate a story for someone else to type if that other person spoke a foreign language! You could learn that person's language, but that could take years.
- The easiest way would be to have a translator.
- Programs are like translators that allow people to work with computers without learning the computer's language.