

CMP 101

# Introduction to Computer Science Module 1C

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## Computer Users

- Computers are now being used by virtually everyone in all works of life.
- We can categorize users to two main types: expert users and end-users.

# Expert Users

- Expert users are professionals (Engineers and Programmers) whose duty is to develop the computer systems that in common use today.
- Computer engineers usually produce the hardware systems while programmers produce the software programs.
- Among the software developers, we have the system programmers who specialise in developing the operating systems and system utilities and we have the software packages developers.

# End-Users

- End-users are computer users who use the computers for the day to day running of their businesses.
- They are usually not experts and depends on programs developed by expert users and programmers.
- Among the end-users, we can have various categories.

## Home Users

- **Home users** spend times on the computer for personal and business communications, budgeting and financial management, entertainment and web access.

## Small office/home office (SOHO) users

- **Small office/home office (SOHO) users** include any company with fewer than 50 employees, as well as self-employed people that work out of their homes.

## Mobile users

- **Mobile user** – a mobile user travels to and from main office or school to conduct business, communicate or do homework.

## Large business user

- **Large business users** – users who work for a company that has a large number of employees and computers are usually connected to a network.



## Power users

- **Power users** – such as engineer, architect, or desktop publisher typically works with multimedia, which combines several media elements into one applications, and requires the capabilities of a workstation or other powerful computer.

## Other Classifications

- Stuart Sierra (2006) uses another view to classify computer users.
- He expresses the opinion that nearly all computer users can be divided into three broad categories based on the way they think about computers.

# Application-Oriented Users

- The vast majority of computer users are application-oriented.
- They have training and experience exclusively with commercial software.
- They understand concepts peculiar to computers such as files, folders, saving, and deleting.
- They live in a WYSIWYG world; although they may be aware that what they see on the screen is not an entirely accurate representation of what the computer is actually doing, they are not interested in understanding hidden implementations.
- They have learned how to map their thinking onto the capabilities of the applications they regularly use, and they accept whatever limitations that thinking may impose.
- They are pragmatic, learning as much as they need to get their work done. A new problem requires a new piece of software.
- Spreadsheet “programmers” fall into this category, as may some programmers who work primarily with application scripting tools such as Microsoft Visual Basic for Applications.
- Nearly all commercial software is targeted at this group of users, who can be considered “computer-literate.”

# Goal-Oriented Users

- The second largest group consists of goal-oriented users. These users focus exclusively on the goals they want to accomplish and neither understand nor care about the software they use to accomplish those goals. This could be called the “I just want to type a letter” group. They only see the final product. They do not care about, for example, the difference between a word processor document and a PDF image of that same document, so they do not understand why they can make textual edits to one and not the other. They could be described as “computer-illiterate,” even if they work with computers on a regular basis. Many very intelligent people, scientists and scholars, fall into this category. They are frustrated by the limitations of the software they use because they do not understand the reasons for those limitations. Though they may use common terms such as “files,” they typically map those concepts onto their real-world metaphorical analogues, resulting in confusion. (“Why can’t I keep this picture in my email file?”)

# Hackers

- The third and smallest group of computer users — ironically, the original computer users — is comprised of hackers. Hackers are computer-oriented computer users. They have learned how to think like a computer, to understand the processes the computer goes through. They favour small tools (e.g. the command line, shell scripts) over large applications because they want to be in precise control of what the computer is doing at all times. They comfortably work with data in “raw” formats such as text files. This does not necessarily mean they are tied down with minutiae of implementation; often they can work at much higher levels of abstraction than other users. Hackers tend to seek out the abstract patterns inherent in whatever end result they are working towards, then implement those patterns in the computer. A new problem rarely requires new tools, merely a new application of existing tools. They will create whatever new tools are needed to bring the computer up to the level of the problem, rather than trying to adapt the problem to fit the computer. On the other hand, their solutions tend to be brittle, with a lot of exposed complexity that makes them unsuitable for non-hacker users.

# Job-based Classification of End-Users

- Computer end-users can also be classified based on their organisations and the job they performed.
- According to TechNet (2013), a Microsoft publication, large organizations have many different types of users. The following are some of the differences that influence a user's pattern of computer usage:
- The organizational unit (OU) to which the user belongs (such as accounting, engineering, or marketing).
- The type of work the user performs (technical, executive, or administrative support, for example).
- Where the user performs their work (such as in an office, from a remote location, or at a shared computer).
- The degree of autonomy the user requires to do their job.
- The amount and type of support the user requires.

# User Types

- **Roaming:** Many users move from one computer to another. Roaming users typically do not take a computer with them when they move from one location to another; instead, they use the computer at the location where they are working. Receptionists or bank tellers who often work at several different desks are examples of roaming users.
- **Mobile:** A growing number of workers travel regularly and perform their work using a portable computer. While traveling, they are frequently disconnected from the network, and often connect to the network using low-bandwidth connections. Sales people and consultants are frequently in the mobile user category.

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## User Types..

- **Remote:** Remote users differ from mobile users because they generally connect to the network from a fixed location, such as a branch or home office that often involves a slow or intermittent network link.
- **Task-based:** Users who require a computer to perform a specific, limited set of tasks, such as entering orders. The task-based user might only require a computer running Terminal Services. Receptionists and bank tellers are examples of task-based users.
- **Knowledge Workers:** Users, such as engineers, lawyers, graphic designers, and programmers, who place the greatest demands on their computers, often require specialized applications and customized configurations.