

Computer Software

LECTURE 06 – WEEK 04

Topics to be covered

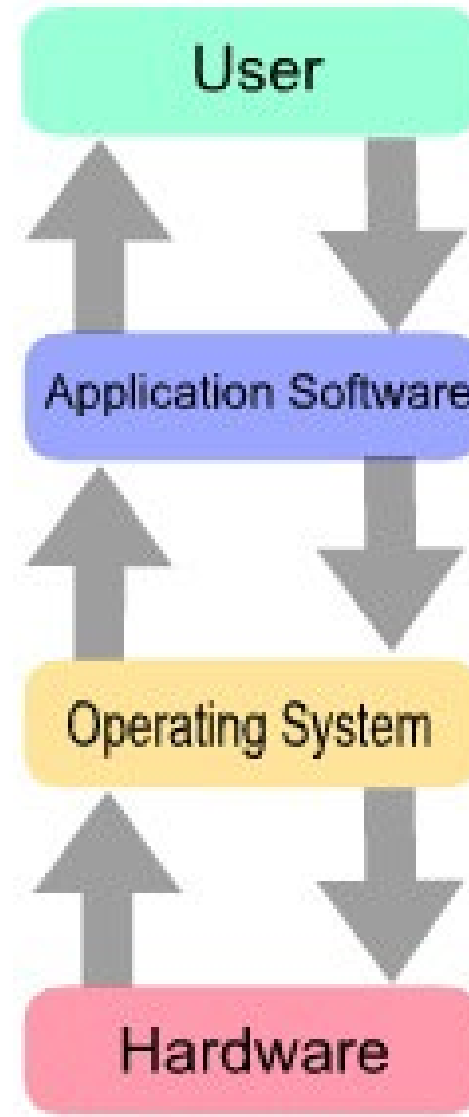
- ▶ What is Software?
- ▶ System Software, and its types
- ▶ Application Software, and its types

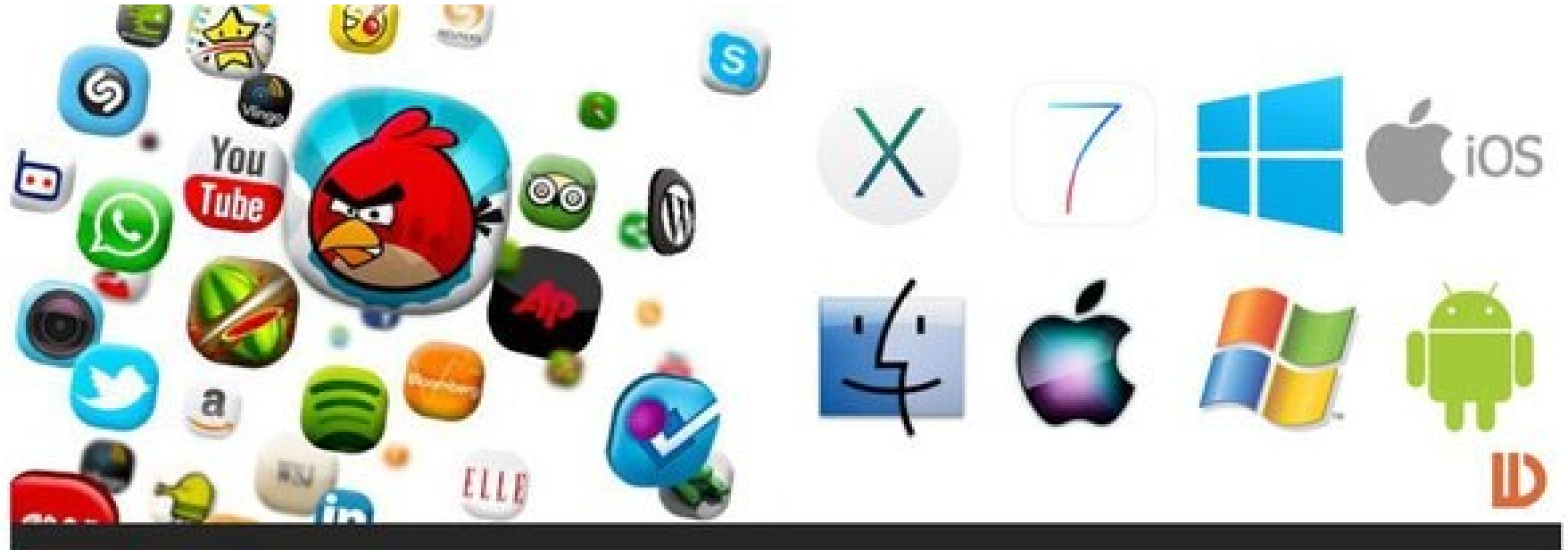
What is Software?

- ▶ Hardware includes all the physical pieces that make up a computer. However, hardware is useless without software.
- ▶ Software includes all of the programs that tell a computer what to do and how to do it.
- ▶ Think of a computer as a sports teams. Hardware is the players, and software is the coach.
- ▶ Software is a kind of program that enable a user to perform some specific task or used to operate a computer.
- ▶ It directs all the peripheral devices on the computer system.

Types of Software

- ▶ The software has mainly divided into two categories:
 - ▶ System Software
 - ▶ Application Software
- ▶ System Software includes programs that help the computer work properly.
- ▶ You are probably more familiar with application software, which are programs designed to help you to do tasks such as writing a paper or making a graph.





Application Software vs. Operating System:

System Software

- ▶ System Software provides a platform to run a computer's hardware and computer application to utilize system resources and solve their computation problem.
- ▶ It is written in a low-level language, like assembly language, so it can easily interact with hardware with the primary level.
- ▶ It controls the working of peripheral devices.
- ▶ The best-known example of system software is the operating system (OS), which is responsible for manages all the other programs on a computer.

Types of System Software

Below are some essential types of system software that exist in current computer systems and help users perform everyday tasks.

- 1) Operating System
- 2) Utility Software
- 3) Device Drivers
- 4) Firmware
- 5) Programming Language Translator

<https://www.thecrazyprogrammer.com/2021/09/types-of-system-software.html>

Operating System

- ▶ The operating system lets the hardware devices communicate with one another and keeps them running efficiently.
- ▶ It also supports the hardware when applications programs are running.
- ▶ The two most widely operating systems are macOS and Microsoft Windows.



Utility Software



- ▶ Programs that help the computer work properly are called utility software.
- ▶ They usually do maintenance and repair jobs that the operating system cannot do itself.
- ▶ Some utility programs repair damaged data files or save files in certain ways, so they take up less space.

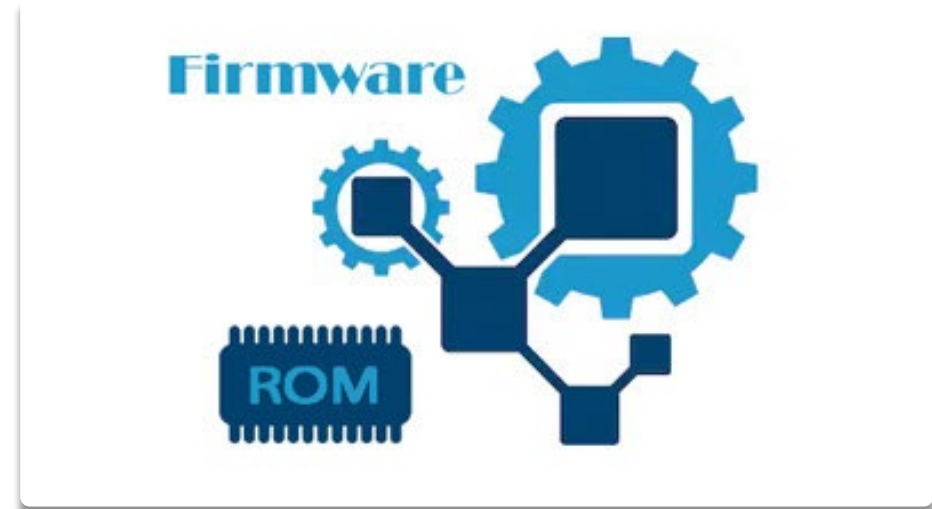
Device Drivers

- ▶ Device Drivers are the programs that enable peripherals and devices to communicate with the hardware through operating system.
- ▶ If a device stops working, it may be because there is a problem with the driver.
- ▶ You can use device management utility to check that the device is set up properly and that driver software is installed and up-to-date.
- ▶ In Windows it is called Device Manager, on Mac systems, it is called Profile Manager.

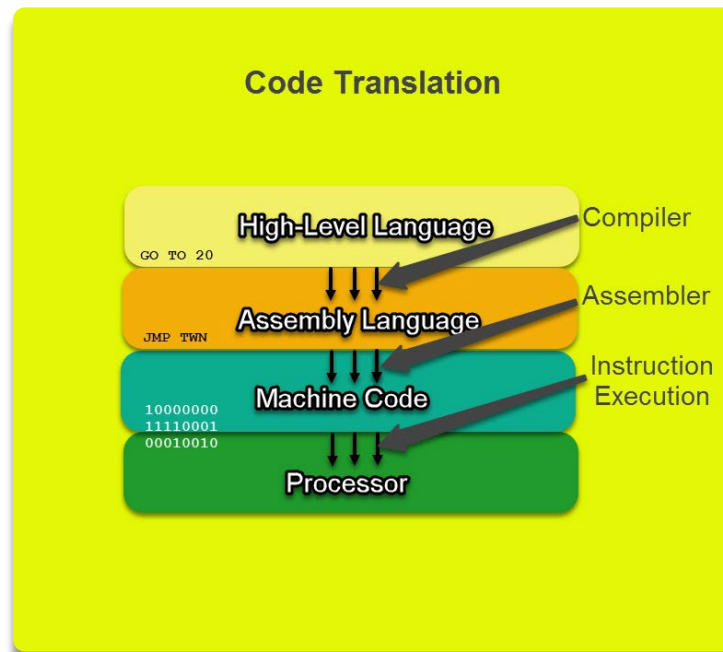


Firmware

- ▶ Firmware is the software that provides basic instructions for controlling devices.
- ▶ It is already present in the RAM, ROM, and other chips so that the operating system can identify those.
- ▶ It is a permanent software or program, that is written in the ROM during the time of manufacturing.
- ▶ Examples are BIOS, EEPROM, flash memory, ROM.



Programming Language Translator



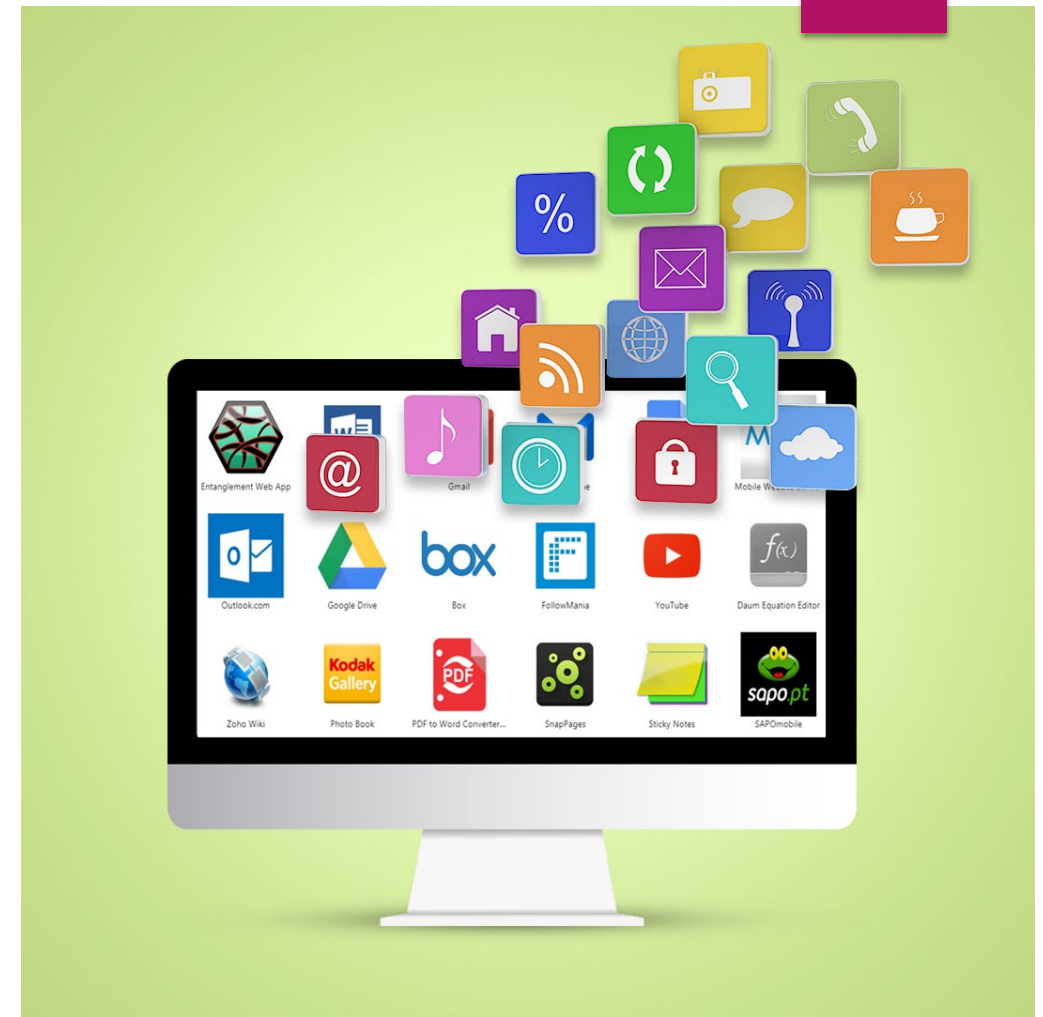
- ▶ These are the software that is used by the programmers so that they can translate high-level language into machine language.
- ▶ C++, Python, and PHP are some of the programming languages used to program the codes.
- ▶ A translator is a program that converts source code into machine code.
- ▶ Generally, there are three types of translator:
 - ▶ Compiler
 - ▶ Interpreters
 - ▶ Assemblers

<https://www.bbc.co.uk/bitesize/guides/z4cck2p/revision/3>

Application Software

- ▶ Application software is a type of computer program that performs a specific personal, educational, and business function.
- ▶ Each application is designed to assist end-users in accomplishing a variety of tasks, which may be related to productivity, creativity, or communication.
- ▶ It is also called end-user software.

<https://www.bridge-global.com/blog/types-of-application-software/>



List of Application Software

- ▶ Packaged Software
- ▶ Custom Software
- ▶ Shareware
- ▶ Freeware
- ▶ Public domain Software

Packaged Software

OFFICE SOFTWARE PACKAGES



- ▶ Packaged software is a collection of programs that perform similar functions or have similar features.
- ▶ For example, Microsoft Office includes multiple applications such as Excel, Word, and PowerPoint.
- ▶ Video and audio editing software may also be available as packaged software, used for editing music and video files used in a movie.
- ▶ Some programs included in packaged software may be available for purchase individually, however, purchasing packaged software is often cheaper than purchasing each software program separately.

Custom Software

- ▶ Some organizations need software programs to do very specific jobs.
- ▶ They hire people to write custom software designed to do those jobs.
- ▶ They are expensive.

<https://www.botreetechnologies.com/blog/customized-software-what-is-it-types-and-examples/>



Shareware



- ▶ Shareware is software that is distributed free on a trial basis with the understanding that the user may need or want to pay for it later.
- ▶ Other shareware (sometimes called liteware) is offered with certain capabilities disabled as an enticement to buy the complete version of the program.
- ▶ The ultimate goal of the software developer is to convert the free user to a paying customer down the line.

<https://us.norton.com/blog/emerging-threats/shareware#>

Freeware

- ▶ Freeware is computer software that is fully functional, available free of charge for an indefinite period of time and is either downloadable from the internet.
- ▶ Freeware is software under copyright.
- ▶ Users are not allowed to modify and/or resell the software.



Shareware



- Free to use with limitations
- Forced trial period, often 30 days
- Some features may require payment

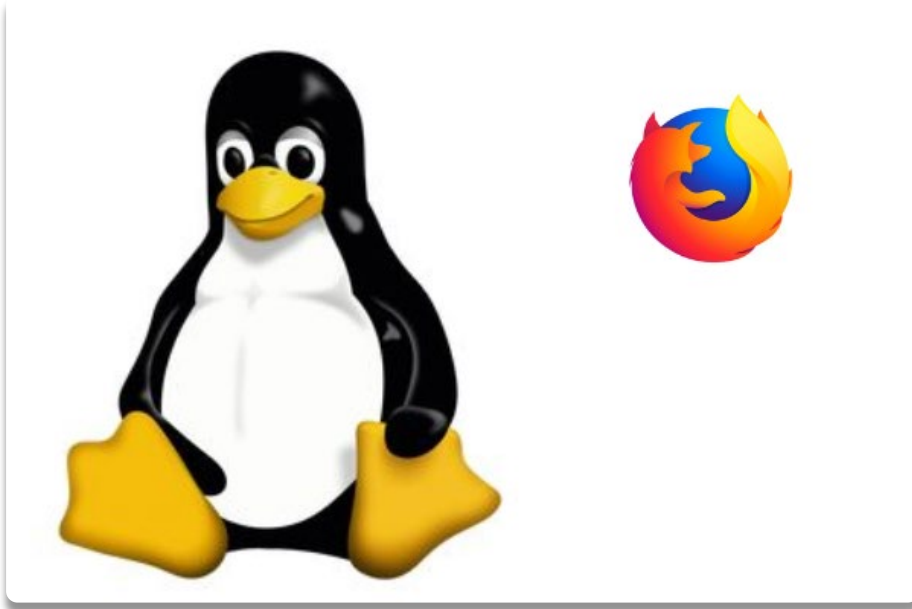
Freeware



- Free to use with no limitations
- No trial period
- All features are operational for all users

Shareware vs Freeware

Public Domain Software



- ▶ Public Domain Software is any software that has no legal, copyright or editing restrictions associated with it.
- ▶ It is free and open-source software that can be publicly modified, distributed or sold without any restrictions.

<https://www.liveabout.com/open-source-vs-public-domain-3515323#:~:text=Examples%20include%20LINUX%2C%20Apache%2C%20Firefox,office%20suite%20offered%20by%20Apache.>



Any
Question

