

Department of Education

SPTVE

COMPUTER SYSTEMS SERVICING 9

Installing and Configuring

Computer Systems

Quarter 2: Week 3 Module



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EXPECTATIONS

At the end of the module, the learners are expected to:

1. identify and explain different types of software;
2. create portable bootable devices in accordance with software manufacturer instruction; and
3. appreciate the importance and value of a license software.



PRE-TEST

Directions: Encircle the letter which describes the correct answer.

1. Which of the following is not an application software?
A. iOS
B. qr code scanner
C. ms word
D. photoshop
2. Its function is to provide link between the computer hardware and the user.
A. application software
B. firmware
C. operating system
D. programming language
3. It is a set of instructions, programs that are used to give command to hardware.
A. adware
B. application
C. firmware
D. software
4. The following are examples of operating system, except _____.
A. google
B. fedora
C. marshmallow
D. windows 10
5. Which command should come first in creating bootable disk in command prompt?
A. clean
B. diskpart
C. list disk
D. select
6. In CSS NC II, what device you will need to create a bootable disk?
A. flash drive
B. floppy disk
C. installer
D. usb
7. It can make a copy of all information stored on a disk
A. back up utilities
B. disk cleaner
C. disk compression
D. disk defragmenter
8. A third-party software application for creating bootable disk.
A. avira
B. java
C. rufus
D. xcopy
9. This will prevent the computer system files from being corrupt.
A. adware
B. anti-virus
C. back up utilities
D. disk defragmenter
10. CMD stands for?
A. commend up
B. command up
C. command prompt
D. command promp



LOOKING BACK

Directions. List down the steps in building a PC. Write your answer on the space provided for.

Step 1. _____

Step 5. _____

Step 2. _____

Step 6. _____

Step 3. _____

Step 7. _____

Step 4. _____

Step 8. _____



BRIEF INTRODUCTION

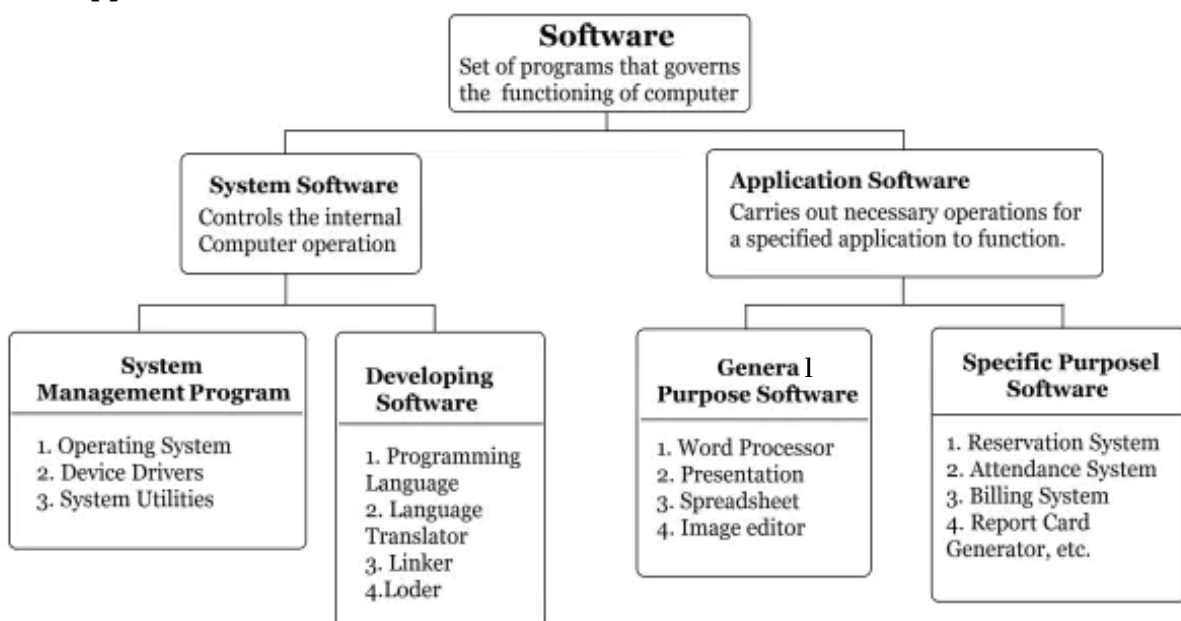
What is Software?

Software is a collection of computer programs and related data that provide the instruction for telling a computer what to do and how to do it. A software is an interface between user and computer. It is a set of instructions, programs that are used to give command to hardware. It is responsible for controlling, integrating and managing the hardware components of a computer system and for accomplishing specific tasks.

Types of Software

Software can be divided into two major categories.

- A. System Software.
- B. Application Software.



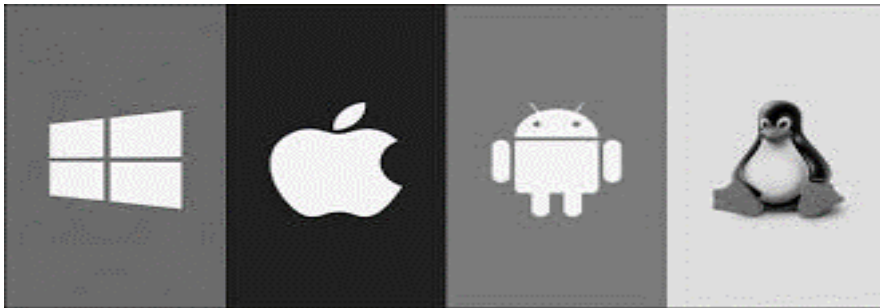
System Software

System software consists of several programs, which are directly responsible for controlling, integrating and managing the individual hardware components of a computer system. It also provides the interface between the user and component of the computer. The purpose of system software is to insulate the applications programmer as much as possible from the detail of the particular complex computer being used.

Depending on the functionality, the system software can be further divided into two major categories; system management program and developing software.

1. System Management Program:

It includes an integrated system of programs, which manages the operations of the processor, controls input/output, manages storage resources and provides various support services. Some common examples of system management programs are operating system, device driver and system utilities.



Operating System

It consists of programs, which controls, which controls, coordinates and supervises the activities of the various components of a computer system. Its function is to provide link between the computer hardware and the user.

It performs all internal management functions (disk access, memory management, task scheduling and user interfacing) and ensures systematic functioning of a computer system. It provides an environment to run the programs. e.g., MS-DOS, Windows 10/2012/, Unix Linux, etc.

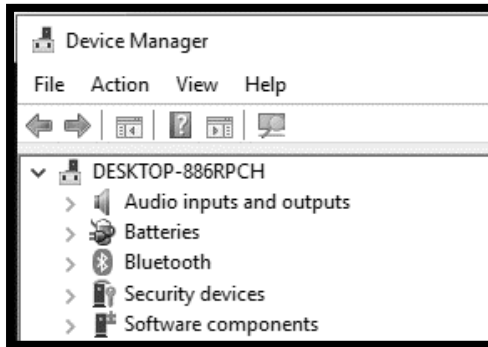
BIOS

The Basic Input / Output system (BIOS) is commonly known as System Bios. The BIOS controls various electronic components within the main computer system. The initial function of the BIOS is to initialize system devices such as the RAM, hard disk, CD/DVD drive, video display card and other hardwares. The BIOS sets the machine hardware into a known state that helps the operating system to configure the hardware components. This process is known as Booting Up.

Device Drivers

A software, which is written with the objective of making a device functional when it is connected to the computer is called device driver. It is a system software that acts like an interface between the device and the user. Every device, whether it is a

printer, monitor, mouse or keyboard has a driver program associated with it for its proper functioning.



Device drivers are a set of instructions that introduce our PC to a hardware device. Device drivers are not independent programs, they assist and are assisted by the operating system for the proper functioning.

System Utilities

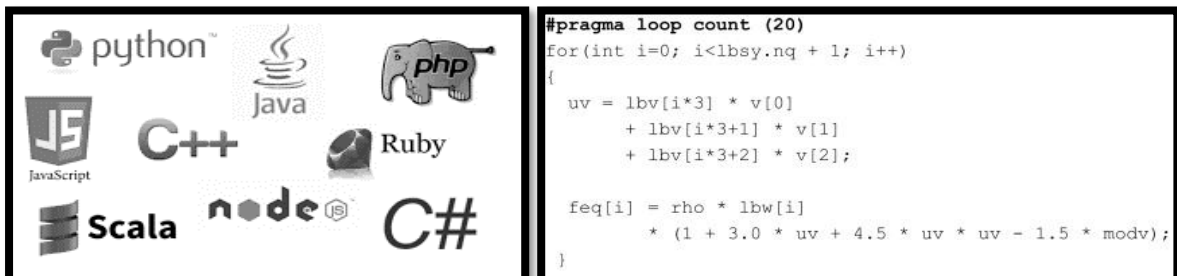
These programs perform tasks related to the maintenance of the computer system. These are the packages which are loaded into computer during time of installation of operating system. They are used to support, enhance, expand and secure existing programs and data in the computer system.

System utility mainly consists of the following functions:

- **Disk Compression** - It increases the amount of information that can be stored on a hard disk by compressing all information stored on a hard disk. This utility works automatically and the user does not need to be aware of its existence.
- **Disk Fragmenters** - It detects computer files whose contents are broken across several locations on the hard disk and moves the fragments to one location to increase efficiency. It can be used to rearrange files and unused space on your hard disk.
- **Backup Utilities** - It can make a copy of all information stored on a disk and restore either the entire disk or selected files.
- **Disk Cleaners** - It is used to find files that have not been used for a long time. This utility also serves to increase the speed of a slow computer.
- **Anti-Virus** - It is the utility which is used to scan computer for viruses and prevent the computer system files from being corrupt.

2. Developing Software

It is a software which provides service required for the development and execution of application software. The programming languages, language translator, loader, linker are required for the application software development.



Programming Languages

A programming language is a primary interface of a programmer with a computer. A programming language is an artificial language to express computation that can be performed by a computer. Each language has its own syntax i.e., the set of specific rules and expresses the logical steps of an algorithm.

Application Software

Application software is a computer software designed to help the user to perform singular or multiple tasks. It is a set of instructions or program designed for specific uses or applications, that enable the user to interact with a computer. Application software are also called the end-user programs. These programs do the real work for users.

There are two types of application software

1. General Purpose Software are designed to perform general tasks (i.e. Word, Excel, PowerPoint, etc.).
2. Specific Purpose Software are designed to perform specific tasks. This type of application software generally has one purpose to execute (i.e. Payroll Management System, Hotel Management System, Reservation System, etc.).

What Is Software Licensing?

A software license is a legal instrument allowing consumers to use or redistribute software. Without the license agreement, using the software would constitute a breach of copyright law. The particular license agreement will explain to the end-user how they can use the software. All software must be legally licensed before it can be installed. Where software licensing becomes confusing is in the different types of licenses and the rights attached to the various licenses.

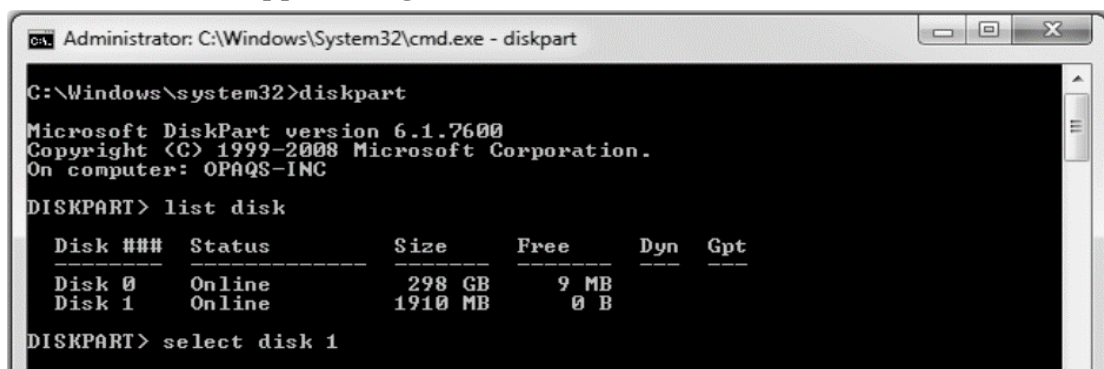
Why Software Licensing Is Important?

Licensing is important because it helps companies more efficiently provision their software. A lot of products are far more complex and boast many more features than we may need at any given time, so vendors create multiple tiers and permission sets and package them up into easy-to-distribute licenses. In turn, by purchasing a license, you allow the vendor to set contractual terms for how you will use the service. This helps prevent pirating as others have said, as well as over-usage on the user side. Simply put, licensing is for the convenience of the user and the protection of the software company's intellectual property.

Different Methods on Creating Bootable Flash Drive

First Method: Using Diskpart Command

Step 1. Insert your USB flash drive to your running computer. As the first step, we need to run Command Prompt as administrator. To do this, we need to find cmd by typing 'cmd' in the search box on Windows Start Menu. After search result for 'cmd' appears, right click on it and select "Run as administrator".



```
Administrator: C:\Windows\System32\cmd.exe - diskpart
C:\Windows\system32>diskpart
Microsoft DiskPart version 6.1.7600
Copyright (C) 1999-2008 Microsoft Corporation.
On computer: OPAQS-INC

DISKPART> list disk

   Disk ###  Status         Size           Free           Dyn  Gpt
   -----  -
   Disk 0    Online         298 GB          9 MB
   Disk 1    Online        1910 MB          0 B

DISKPART> select disk 1
```

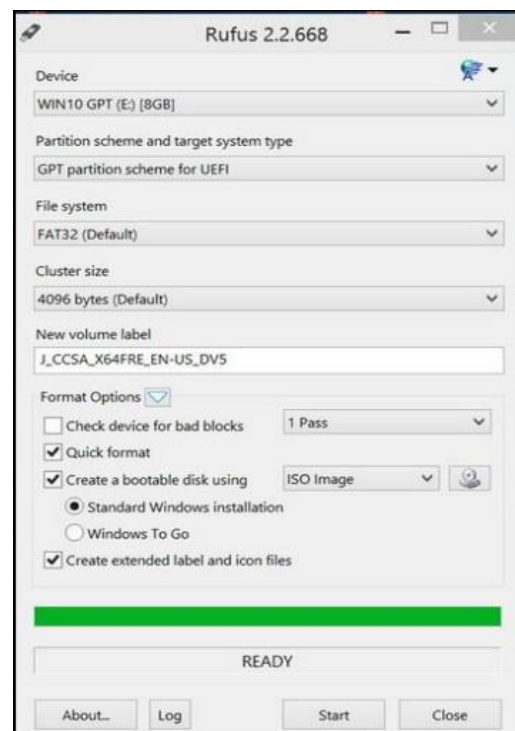
- Step 2.** Type 'diskpart' on Command Prompt (without quotes) and hit Enter. Wait for a while until the DISKPART program run.
- Step 3.** Type 'list disk' to view active disks on your computer and hit Enter. There would be seen that the active disks shown as Disk 0 for hard drive and Disk 1 for your USB flashdrive with its total capacity.
- Step 4.** Type 'select disk 1' to determine that disk 1 would be processed in the next step then hit Enter.
- Step 5.** Type 'clean' and hit Enter to remove all of data in the drive.
- Step 6.** Type 'create partition primary' and hit Enter. Creating a primary partition and further recognized by Windows as 'partition 1'.
- Step 7.** Type 'select partition 1' and hit Enter. Choosing the 'partition 1' for setting up it as an active partition.
- Step 8.** Type 'active' and hit Enter. Activating current partition.
- Step 9.** Type 'format fs=ntfs quick' and hit Enter. Formatting current partition as NTFS file system quickly.
- Step 10.** Type 'exit' and hit Enter. Leaving DISKPART program but don't close the Command Prompt instead. We would still need it for next process.

Copying Installation Files

To install Windows from a bootable USB drive, you just need to copy the whole installation files contained on the DVD installer to flash drive.

Second Method: Using Rufus (Third-Party Software)

1. After Rufus and the ISO has been downloaded; open rufus and choose the Device (USB) which should be used as your bootable media.
2. Then, choose GPT partition scheme for UEFI and leave the File System & Cluster Size to default settings; remember to label the drive.
3. Check Create a bootable disk and ensure that the ISO Image is selected from the drop down, use the small drive icon to locate and choose the image.
4. Next, choose Start to finish.





ACTIVITIES

Grouping: Arrange the following terms or words into System Software and Application Software. Write your answers on the table below.

kitkat	linux	ms access	windows xp
firefox	paint 3D	iOS	publisher
O365	MacOS	safari	chrome OS
notepad	zoom	donut	catalina

System Software	Application Software



REMEMBER

Directions. Give the meaning of the following terms. Write your answers on the space provided for.

1. Software -

2. System Software -

3. Application Software -

4. General Purpose Software -

5. Specific Purpose Software -

6. Developing Software -

7. System Management Software -

8. Bootable Disk -



CHECK YOUR UNDERSTANDING

Directions. Answer the following questions in your own words.

A. Why it is important to use a licensed software?

B. What is the difference between system software and application software?

C. Which method is better in creating a bootable disk, using diskpart or using a third-party software like rufus? Explain your answer.



POST TEST

Directions: Encircle only the letter which describes the correct answer.

- It can make a copy of all information stored on a disk
 - back up utilities
 - disk cleaner
 - disk compression
 - disk defragmenter
- Its function is to provide link between the computer hardware and the user.
 - application software
 - firmware
 - operating system
 - programming language
- CMD stands for?
 - commend up
 - command up
 - command prompt
 - command promp
- It is a set of instructions, programs that are used to give command to hardware.
 - adware
 - application
 - firmware
 - software

- The following are examples of operating system, except _____.
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 B. fedora D. windows 10
- Which command should come first in creating bootable disk in command prompt?
 A. clean C. list disk
 B. diskpart D. select
- A third-party software application for creating bootable disk.
 A. avira C. rufus
 B. java D. xcopy
- Which of the following is not an application software?
 A. iOS C. ms word
 B. qr code scanner D. photoshop
- In CSS NC II, what device you will need to create a bootable disk?
 A. flash drive C. installer
 B. floppy disk D. usb
- This will prevent the computer system files from being corrupt.
 A. adware C. back up utilities
 B. anti-virus D. disk defragmenter

Answer Key

			10. B	C	10.
			9. A	B	9.
			8. A	C	8.
			7. C	A	7.
			6. B	A	6.
			5. A	B	5.
			4. D	A	4.
			3. C	D	3.
			2. C	C	2.
			1. A	A	1.
		Post Test		Pre-Test	
ACTIVITY	System Software				
		Application Software			
		firefox			
		0365			
		linux			
		MacOS			
		iOS			
		donut			
		WindowsXP			
		Chrome OS			
		catalina			
		safari			
		ms access			
		zoom			
		paint3D			
		notepad			

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