

**SPECIAL PROGRAM IN  
TECHNICAL  
VOCATIONAL  
EDUCATION**


**Grade 7**

**Quarter 2 Week 1**

**INTERNET AND  
COMPUTING  
FUNDAMENTALS**

**Looking at Types and Purposes of  
Software**

<b>MODULE 9</b>	<b>COMPUTING FUNDAMENTALS</b>
<b>Topic</b>	<b>Definition of Software and System Software</b>



**What I need to know?**

This lesson will talk about the software applications

**LO 6.** Identify the types and purposes of software

1. Define and explain software
2. Determine the different types and purposes of software
3. Recognize software development process
4. Identify and explain functions of application and system software
5. Analyze and solve issues related to software upgrades

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**What Is It?**

**What is a Software Program?**

- Called software as they only function when loaded into computer's RAM memory and must be permanently stored on hard disk
- Created using programming languages that contain commands to perform specific tasks
  - Commands can be available in menu, toolbar button, shortcut keystroke, shortcut menu, or combination
  - Based on set of rules called *algorithms* created in software program
  - Algorithms set guidelines for how data is input into software program, and format for output
- Software program used determines whether output is text, numbers, sound, video, etc.
- Which software programs you use depends on what requirements for output
- Choice of software based on what you need to do, degree of detail and features needed, and what you can afford
- All retail software programs go through thorough process to ensure minimal amount of problems
  - Software program created or updated based on new technology, request for new features, etc. by programmers
  - Once developed, copies of program sent to designated people who agree to test beta of program
  - Testing occurs for specific amount of time with feedback required
  - Programmers then revise and modify program based on feedback

- Another beta copy and further beta testing may be repeated many times as needed
- When beta period over, “gold” copy created and distributed to small number of customers
- Generally within month of gold copy being released, final software version released to general public

### **Upgrading Your Software**

- Very unusual for software programs to be error free with first release of software
- *Bugs* (errors) that occur generally are items software company can't always predict based on how customer uses program
- *Updates* or upgrades not always problems with the software
  - May occur as a result of changes in government rules or requirements, or external factors
- Registering your copy of the software provides you with notices whenever an update or upgrade is available for the software
  - Updates can be received via the postal mail system, via e-mail or an online system
- Need to update software depends on software and whether you feel the update is warranted
- Drawbacks to updating the software include:
  - Incompatibility or conflicts with other software
  - Incompatibility or conflicts with the operating system
  - Problems with upgrade within the software
- For most updates/patches on operating or network software, these should be done by very experienced people who can “tweak” the system if something doesn't work
- Most people tend to wait for a couple of weeks after the release of the update/upgrade to ensure there are no problems with the updated software
- It is very prudent to register the software on your system with the software vendor to receive notices whenever an update is available

### **What about Upgrading to New Versions?**

- New versions generally released on a yearly or two-year basis
- Consider the following before switching to new software:
  - Are the features in this version crucial for daily tasks?
  - Can your current computer handle the new software?
  - How many people may be affected by the software change?
  - How much training will be involved to switch everyone to new version?
- *Upgrade* version less expensive but requires Full version of software already installed or access to CD for previous Full version
- *Full* version generally double the cost of Upgrade version but contains all files for software program
- Large companies purchase licenses for each computer where program will be installed

### **Looking at Operating Systems**

- *Operating system or environment* is collection of programs designed to control computer's interaction and communication with user
- Essentially performs two important functions

- Manages input devices, output devices, and storage devices
- Manages files stored on the computer and recognizes file types
- Every computer requires operating system to function
- Examples of operating systems include:
  - DOS
  - Windows
  - Unix
  - Linux
  - Apple Operating System
- With the exception of Unix, all other computers use a graphical operating system.
  - Graphical user interface (GUI) allows person to use mouse and other devices to point and select desired functions rather than remember commands.

## DOS

- Original operating system for PC and stands for Disk Operating System
- Today, rare to find computer still using DOS as operating system due to display type
- Typing commands to perform tasks based on one line commands often hard to decipher, especially when errors occurred

C:\>d:  
Invalid drive specification

```

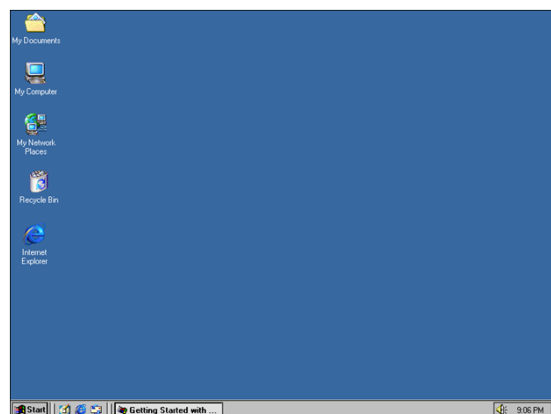
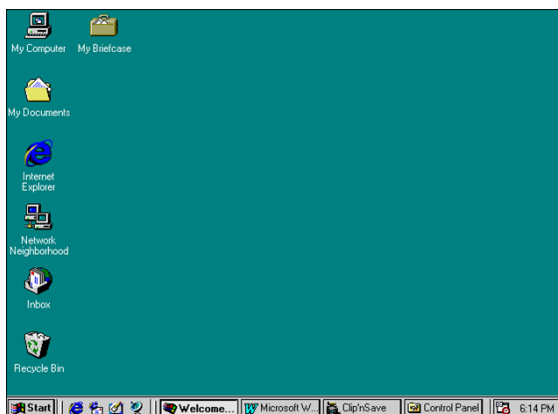
Northcoast Machines Ltd.                               Jan 01 1997
Add/Modify/Delete Batches
Batch [ ] Entry mode (Normal entry) Entries:
Description [ ]                               Debits:
                                                Credits:

Entry [ ] Period [ ]
Line [ ]
Source code: -[ ]
Date [ / / ]
Reference [ ] Description [ ]
Account [ ] Dept. [ ]
Debit [ ] Credit [ ]
-----Line-Reference-----Description-----Acct.-----Dept.-----Debit-----Credit-----

Entry totals:
Out of balance by:
BLANK=New Batch ESC=Exit                               F1=Help
  
```

## Microsoft Windows

- Operating system for PCs
- Allows WYSIWYG screen display
- Each version provides better graphics display and better file and disk management capabilities



## Windows XP

- Advanced graphics display as well as enhanced file and disk management tools



## Windows Vista

- Windows Vista is an operating system developed by Microsoft. The business version was released at the end of 2006, while the consumer version shipped on January 30, 2007.



## Windows 7

- Windows 7 is an operating system that was produced by Microsoft and released as part of the Windows NT family of operating systems. It was released to manufacturing on July 22, 2009 and became generally available on October 22, 2009.



## Windows 8

- Windows 8 is an operating system that was produced by Microsoft, released as part of the Windows NT family of operating systems. The product was released to manufacturing on August 1, 2012, and generally to retail on October 26 of the same year.



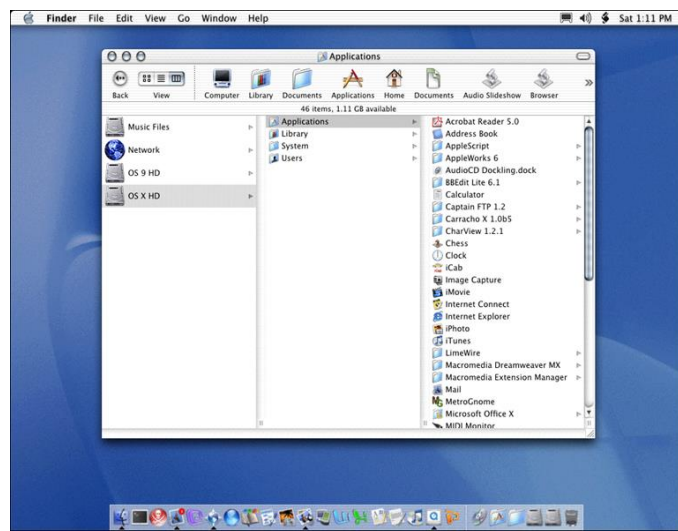
## Windows 10

- Windows 10 is a series of operating systems developed by Microsoft and released as part of its Windows NT family of operating systems. It is the successor to Windows 8.1, released nearly two years earlier, and was released to manufacturing on July 15, 2015, and broadly released for the general public on July 29, 2015 (latest version).



## Mac OS

- Designed for Apple Macintosh computers
- Provides graphics interface
- One of the original graphical user interface systems and set standard



for true WYSIWYG programs

- Latest version based on Unix technology

## UNIX

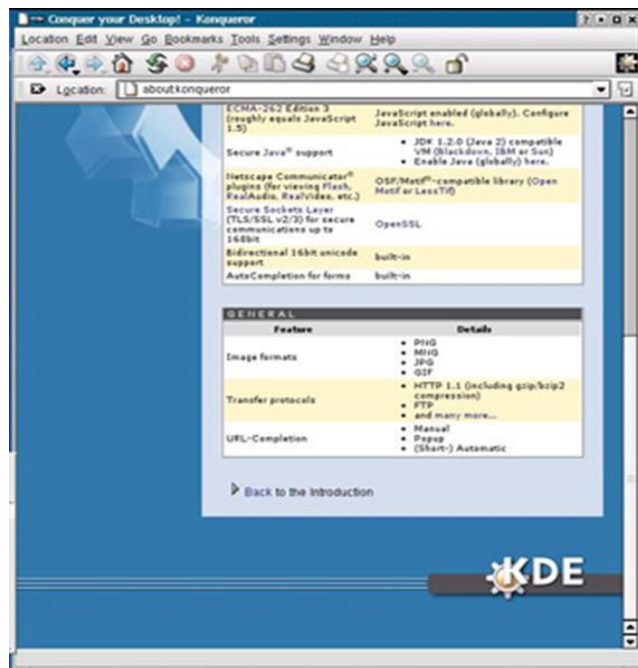
- Created in early 1970s by programmers for programmers
- Designed with flexibility in mind and used one of the more popular programming languages readily available on most computers
- Main drawback is it is based on one-line commands controlling the functions versus a graphical user interface display
- Very popular with universities and scientific or research organizations

```
Processes: 33 total, 2 running, 31 sleeping... 89 threads 12:59:51
Load Avg: 0.44, 0.43, 0.46 CPU usage: 2.7% user, 10.8% sys, 86.5% idle
SharedLibs: num = 101, resident = 22.8M code, 1.62M data, 6.38M LinkEdit
MemRegions: num = 2242, resident = 47.8M + 5.44M private, 45.1M shared
PhysMem: 43.8M wired, 72.1M active, 100M inactive, 216M used, 296M free
VM: 938M + 44.8M 7148(0) pageins, 0(0) pageouts
```

PID	COMMAND	%CPU	TIME	#TH	#PRTS	#MREGS	RPRVT	RSHRD	RSIZE	VSIZE
345	top	8.9%	0:01.06	1	14	15	220K	324K	476K	1.62M
339	tcsh	0.0%	0:00.23	1	24	15	436K	652K	908K	5.72M
338	Terminal	0.0%	0:04.09	4	68	148	1.86M	7.96M	5.81M	59.7M
301	Navigator	0.0%	6:57.02	9	137	321	16.6M	25.6M	32.6M	98.2M
277	AudioCDMon	0.0%	0:00.27	1	48	54	572K	5.11M	1.18M	32.4M
276	Microsoft	0.0%	0:03.55	2	76	82	1.96M	10.0M	3.24M	55.5M
275	SystemUISe	0.0%	0:03.44	3	123	157	2.49M	8.60M	4.55M	70.3M
273	Dock	0.0%	0:05.57	2	98	101	1.83M	5.46M	4.43M	48.9M
268	Finder	0.0%	0:18.86	4	119	233	10.1M	11.6M	12.7M	72.5M
262	pbs	0.0%	0:12.99	1	28	44	5.52M	824K	6.38M	23.0M
258	automount	0.0%	0:00.02	2	11	18	164K	388K	320K	2.14M
247	loginwindo	0.0%	0:11.44	7	147	148	2.89M	5.64M	4.95M	42.2M
243	cron	0.0%	0:00.04	1	9	15	72K	316K	152K	1.52M
239	NUMCompati	0.0%	0:00.01	1	20	16	152K	332K	264K	1.34M
233	SecuritySe	0.0%	0:00.20	1	39	18	300K	596K	648K	2.09M
228	httpd	0.0%	0:00.01	1	9	65	60K	1.22M	268K	2.38M
224	httpd	0.0%	0:00.76	1	9	65	52K	1.22M	1016K	2.38M
212	inetd	0.0%	0:00.01	1	9	13	72K	304K	132K	1.26M
205	coreservic	0.0%	0:00.42	3	52	31	804K	400K	1.04M	2.75M
192	lookupd	0.0%	0:00.92	2	11	19	232K	544K	408K	2.39M
185	netinetd	0.0%	0:00.41	1	8	18	380K	400K	540K	1.70M

## Linux

- Based on Unix and provides more of a graphical user interface than Unix
- Readily available and very popular for use with high-end servers and entrepreneurial software developers



## Handheld Operating Systems

- Designed to work with PDA
- Operating system will depend on PDA type



Palm OS

Windows CE

- Examples of limitations with older operating systems include:
  - File names for DOS programs limited to eight characters only with three-digit file extension type
  - File names for DOS programs restricted from using certain characters
  - No true multi-tasking capability with DOS or the earlier versions of Windows
  - Did not have good memory management capabilities
  - DOS and Unix operating systems were text-based, using only one-line commands
- Aspects of operating systems where problems can arise include:
  - Software does not work
  - Error messages indicating a device does not work
  - Installation files for any hardware or software are specific for that device or software
  - Error messages indicating file missing or corrupted
  - Error messages indicating you do not have access to particular PC, drive, software program, or file/folder

## What have I learned

*Directions: Answer the questions given and use a separate sheet for your answers.*

1. What is the reason why software is created by programmer?
2. How does the operating system manipulate the computer?
3. Which operating system you prefer to install on your computer? Why?

### What I Can Do



#### Activity 1

*Directions: Write the main feature of Operating Systems. Write your answers on a separate sheet.*

Operating System	Main Feature
1. Windows XP	
2. Linux	
3. Unix	
4. Mac OS	
5. Handheld OS	



**Activity 2**

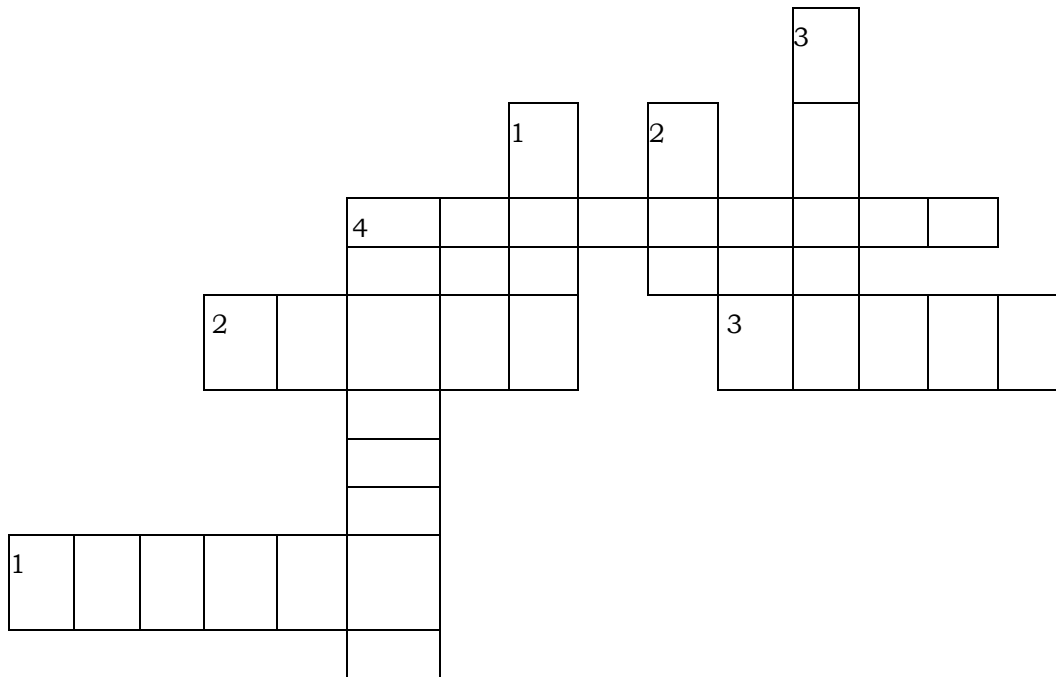
*Directions:* Crossword puzzle. Determine what type of operating system by analyzing the statement written under “down” and “across”. Write your answer on a separate sheet.

DOWN:

- 1 Very popular with universities and scientific or research organizations
- 2 Command line interface
- 3 it was created after Windows XP
- 4 it was created after Windows 7

ACROSS:

- 1 Designed to work with PDA
- 2 popular for use with high-end servers and entrepreneurial software developers
- 3 Designed for Apple computers
- 4 it has advanced graphics display as well as enhanced file and disk management tools

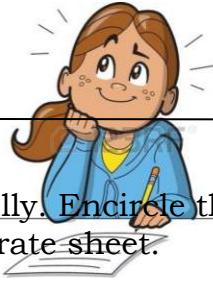


**Activity 3**

*Directions:* Below is the list of different computers, be able to determine what type of OS will be installed on specific computer systems. Write your answer on a separate sheet.

List of Computers	Operating System compatible
Personal Computer (PC)	
Apple MacIntosh	
PDA	

## Assessment



**Direction:** Read the questions carefully. Encircle the letter of the correct answer. Write your answer on a separate sheet.

1. It is called \_\_\_\_\_ as they function when loaded into computer's RAM memory and must be permanently stored on hard disk.  
A. Microsoft      B. Apple      C. Software      D. PDA
2. File names for DOS programs limited to \_\_\_\_ characters only with three-digit file extension type.  
A. 2      B. 4      C. 6      D. 8
3. It is very popular with universities and scientific or research organizations  
A. Mac OS      B. Unix      C. DOS      D. Palm OS
4. It is the successor to Windows 8.1.  
A. Windows 10      B. Linux      C. DOS      D. Unix
5. Type of OS which is very popular for use with high-end servers and entrepreneurial software developers.  
A. Mac OS      B. Linux      C. Unix      D. Windows 7
6. An operating system uses the command line interface to interact with users.  
A. Windows 10      B. Linux      C. DOS      D. Unix
7. It is an operating system for PCs.  
A. Microsoft Windows      B. Apple      C. software program      D. PDA
8. Andy wants to buy an Apple McIntosh computer, but this supplier presented him different operating systems and only one is compatible, what type of operating system will be installed on his computer?  
A. Linux      B. Mac OS      C. Unix      D. Windows 7
9. Which operating system is not capable of multitasking?  
A. Windows 10      B. Mac OS      C. DOS      D. Linux
10. A manager presented a statement about the status of their computer software system in the company is almost obsolete, he was talking that there are new versions generally released on a yearly or two-year basis. What was his idea to ask the company to act on it?  
A. buy new computers      B. upgrading      C. Innovating      D. selling old computers



## Answer Key

### What I have learned

1. Created using programming languages that contain commands to perform specific tasks
2. to control computer's interaction and communication with user
3. Write your ideas based on your choice as to what operating system you prefer to install on your computer and explain why.

### What I can do

#### Activity 1

1. Advanced graphics display as well as enhanced file and disk management tools
2. Very popular for use with high-end servers and entrepreneurial software developers
3. Very popular with universities and scientific or research organizations
4. Designed for Apple Macintosh computers
5. Designed to work with PDA

#### Activity 2

##### DOWN:

- 1 Unix
- 2 DOS
- 3 Vista
- 4 Windows 8

##### ACROSS:

- 1 Palm OS
- 2 Linux
- 3 Mac OS
- 4 Windows XP

#### Activity 3

1. Microsoft Windows
2. Mac OS
3. Palm OS

#### Assessment

1. C
2. D
3. B
4. A
5. B
6. C
7. A
8. B
9. C
10. B

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#### Reference:

IC7 Module –Basic Fundamentals