PHINMA EDUCATION
MAKING LIVES BETTER THROUGH EDUCATION

ITE 335 Platform Technologies
Student Activity Sheet # 06

Name: _____ Class number: _____
Section: _____ Schedule: _____ Date: _____

Lesson title: Operating System Lesson Objectives: • Know what Operating System and its history is. • Understand the function of OS. • Identify the types of OS. • Determine the important features of OS.	Materials: SAS References: *https://www.guru99.com/operating-system-tutorial.html *https://en.wikipedia.org/

Productivity Tip:
"You don't have to see the whole staircase, just take the first step." --Martin Luther King

A. LESSON PREVIEW/REVIEW

Introduction (2 mins)

Hello students! In this session, we will tackle Operating system. OS has a huge impact to the development or to the great progression of Platform technologies.

Activity 1: What I Know Chart, part 1 (3 mins)

The table below shows some questions that are relevant to our Lessons. Please go through Column 2 and write in column 1 your answers on what you initially know about our topic. For the meantime, leave column 3 and get back to it once you reach activity 4.

What I Know	Questions:	What I Learned
	1. What is Operating system?	
	2.What are the different types of OS?	
	3. What are the function of OS?	

B. MAIN LESSON

Activity 2: Content Notes

{You may take down notes or highlight some important keys or make some outline of what and how you understood the topic}

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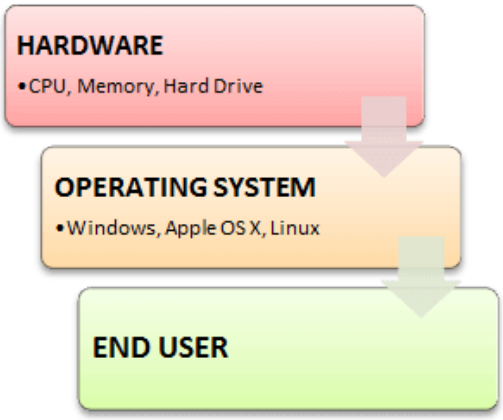
What is an Operating System?

An **Operating System (OS)** is a software that acts as an interface between computer hardware components and the user. Every computer system must have at least one operating system to run other programs. Applications like Browsers, MS Office, Notepad Games, etc., need some environment to run and perform its tasks.
The OS helps you to communicate with the computer without knowing how to speak the computer's language. It is not possible for the user to use any computer or mobile device without having an operating system.



History Of OS

- Operating systems were first developed in the late 1950s to manage tape storage.
- The General Motors Research Lab implemented the first OS in the early 1950s for their IBM 701.
- In the mid-1960s, operating systems started to use disks.
- In the late 1960s, the first version of the Unix OS was developed.
- The first OS built by Microsoft was DOS. It was built in 1981 by purchasing the 86-DOS software from a Seattle company.
- The present-day popular OS Windows first came to existence in 1985 when a GUI was created and paired with MS-DOS.

Types of Operating System (OS)

- Batch Operating System - is one of the important types of **operating system**. The users who use a **batch operating system** do not interact with the computer directly. Each user prepares its job on an off-line device like punch cards and submit it to the computer operator.

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- Multitasking/Time Sharing OS - Time-sharing operating system enables people located at a different terminal(shell) to use a single computer system at the same time. The processor time (CPU) which is shared among multiple users is termed as time sharing.
- Multiprocessing OS - A **multiprocessing operating system** (**OS**) is one in which two or more central processing units (CPUs) control the functions of the computer. ... The use of multiple processors allows the computer to perform calculations faster, since tasks can be divided up between processors.
- Real Time OS - A real-time operating system is an operating system that was intended to serve real-time applications that process data as it comes in, typically without buffer delays. Processing time requirements are measured in tenths of seconds or shorter increments of time.
- Distributed OS - Distributed systems use many processors located in different machines to provide very fast computation to its users.
- Network OS - Network Operating System runs on a server. It provides the capability to serve to manage data, user, groups, security, application, and other networking functions.
- Mobile OS - Mobile operating systems are those OS that are designed to power smartphones, tablets, and wearables devices.

In an operating system software performs each of the function:

1. **Process management**: Process management helps OS to create and delete processes. It also provides mechanisms for synchronization and communication among processes.
2. **Memory management:** Memory management module performs the task of allocation and de-allocation of memory space to programs in need of this resources.
3. **File management**: It manages all the file-related activities such as organization storage, retrieval, naming, sharing, and protection of files.
4. **Device Management**: Device management keeps track of all devices. This module is also responsible for this task and is known as the I/O controller. It also performs the task of allocation and de-allocation of the devices.
5. **I/O System Management:** One of the main objects of any OS is to hide the peculiarities of that hardware devices from the user.
6. **Secondary-Storage Management**: Systems have several levels of storage which includes primary storage, secondary storage, and cache storage. Instructions and data must be stored in primary storage or cache so that a running program can reference it.
7. **Security:** Security module protects the data and information of a computer system for an authorized access and protects it against malware threat.
8. **Command interpretation**: This module is interpreting commands given by the and acting system resources to process those commands.
9. **Networking:** A distributed system is a group of processors which do not share memory, hardware

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devices, or a clock. The processors communicate with one another through the network.

10. **Job accounting**: Keeping track of time & resource used by various job and users.
11. **Communication management**: Coordination and assignment of compilers, interpreters, and another software resource of the various users of the computer systems.

Activity 3: Skill-building Activities

Answer the following:

A. What are the important feature of OS? (10pts)

1.
2.
3.
4.
5.

B. What is the importance of OS? (10pts)

"Check your answers using the *Key to Corrections* found at the end of this SAS. Write your score on your paper."

Activity 4: What I Know Chart, part 2 (2 mins)

This section serves as a review and summary of what you have learned from todays' session. Try to express how your knowledge has changed by reviewing the questions in the What I Know Chart from Activity 1 and write your answers to the questions based on what you know in the third column of the chart.

Activity 5: Check for Understanding (5 mins)

A. Give 5 example of Operating system and identify what type it is.

Example OS	Type of OS
1.	=
2.	=
3.	=
4.	=
5.	=

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A. LESSON WRAP-UP

Activity 6: Thinking about Learning (5 mins)

a) Below is a table that will serves as your work tracker for you to visualize and help you to be on track on how much work you have accomplished and how much work are left to do. Shade the day that corresponds to your accomplished activity

You are done with the session! Let's track your progress

Period 1									Period 2								Period 3								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

b) Think about what you have learned by filling up your "My Learning Tracker". The students will write the learning targets, their scores, learning experience for the session and deliberately plan for the next session.}

Date	Learning Target/Topic	Scores	Action Plan
What is the date today?	*What module# did you do? What were the learning targets? What activities did you do?*	*What were your scores in the activities?*	*What contributed to the quality of your performance today? What will you do next session to maintain your performance or improve it?*

KEY TO CORRECTIONS

A. What are the important feature of OS? (Give at least 5)

1. Protected and supervisor mode.
2. Allows disk access and file systems Device drivers Networking Security.
3. Program Execution
4. Memory management Virtual Memory Multitasking
5. Handling I/O operations
   (Other ans.)
6. Manipulation of the file system
7. Error Detection and handling
8. Resource allocation
9. Information and Resource Protection

B. What is the importance to OS?

An operating system is the most important software that runs on a computer. It manages the computer's memory and processes, as well as all its software and hardware. It also allows you to communicate with the computer without knowing how to speak the computer's language.