



# Passerelles numériques

*A Gateway for Life*



OS & Maintenance

## Chapter 1 – Introduction to Operating System



# Course Objectives

**Students will be able to:**

- Understand what is an OS and it's functions
- Know the different OS families
- Check the hardware requirements prior to install OS



# Starter – Video Tutorial

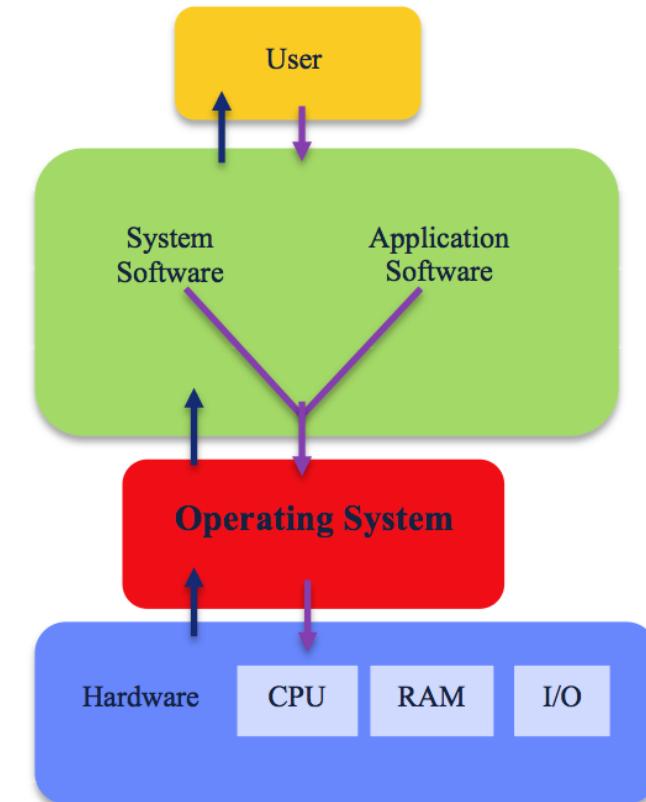
# What is OS and it's function

- **What is OS?**

An **operating system (OS)** is system software that manages computer hardware and software to operate together. .

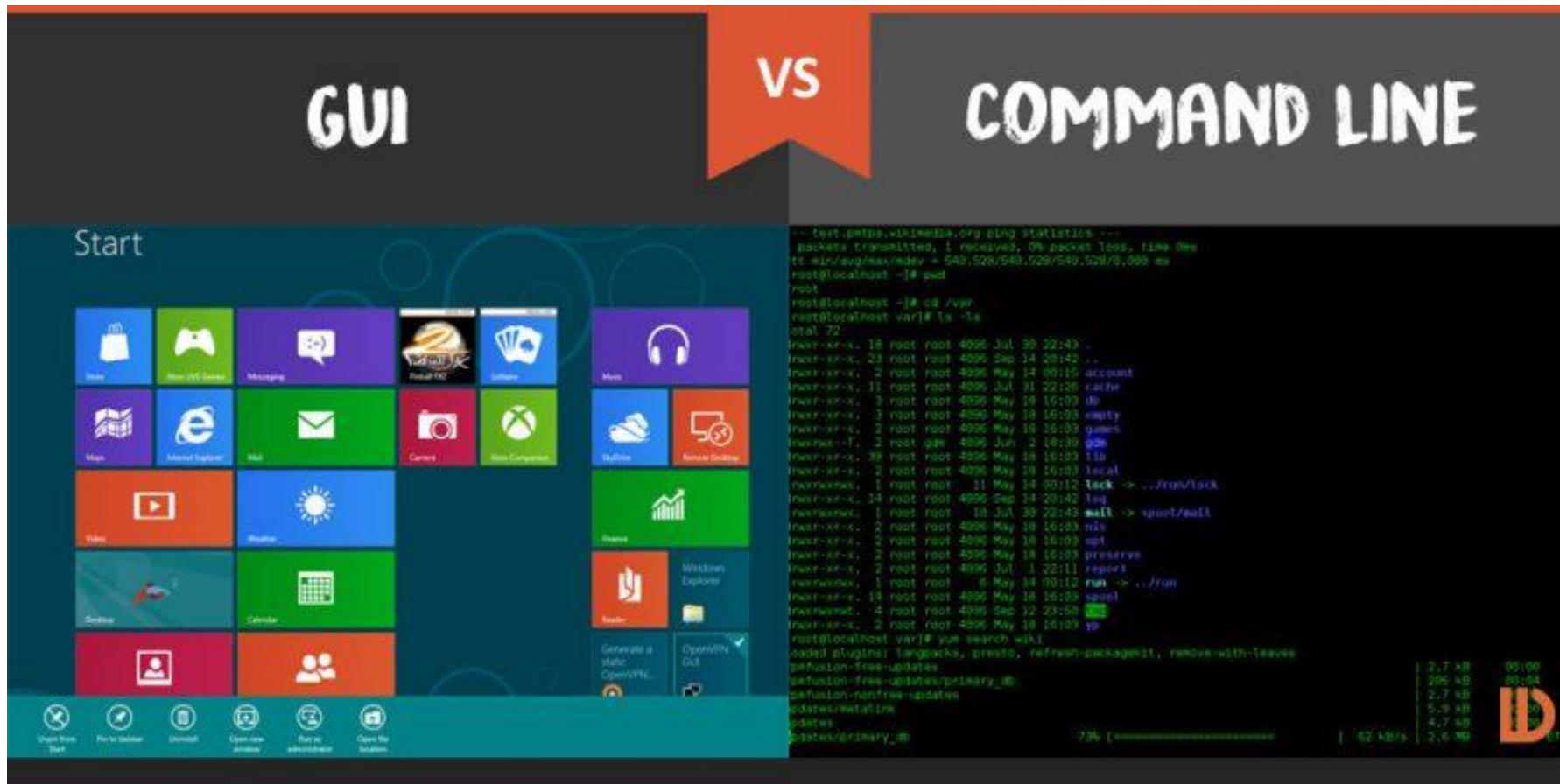
- **OS share the following four main functions:**

- **Providing a user interface**
- **Managing Files**
- **Managing applications**
- **Manage hardware**



# What is OS and it's function

**Providing a user interface:** allow you to interact with computer by command line user interface(CLI) or graphic user interface (GUI).



# What is OS and it's function

**Managing Files:** allow you to store, delete, copy, move and share files.

**Example:**

- Your computer store your documents.
- You can delete, copy or move to other folder.



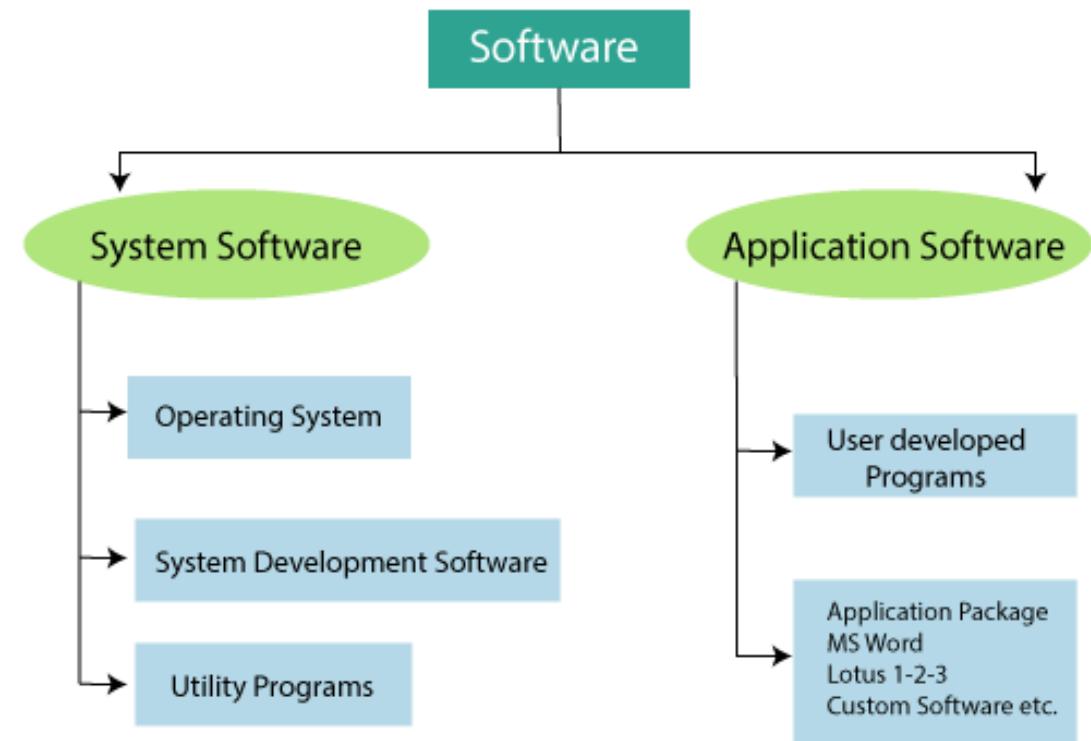
# What is OS and it's function

**Managing applications:** You can install, uninstall and manage program, software or application.

The term software is the opposite of hardware. The hardware describes the physical part of the computer system, but the software refers to applications, scripts, and programs that can run on the device.

There are two main types of software:

- systems software
- application software.



# What is OS and it's function

**Systems software** includes the programs that are dedicated to managing the computer itself, such as the operating system.

**Application software**, or simply applications, is a set of computer programs designed for end-user to perform task.



# What is OS and it's function

**Managing Hardware:** allow you control hardware that connected to computer through an application known as **driver**. Each driver designed to control the hardware.

Example:

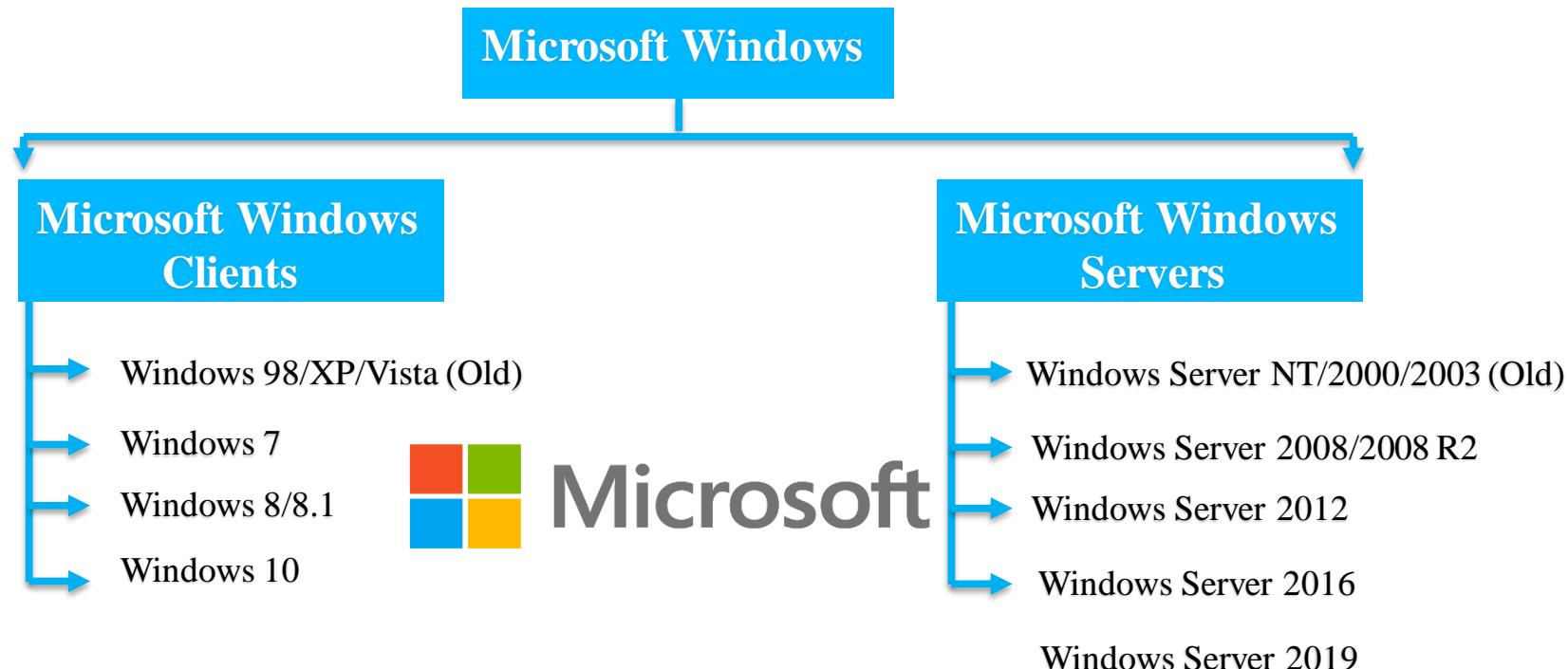
- Manage Hard Drive, RAM, CPU.
- All hardware need software to operate.



# OS families

## Microsoft Windows

Microsoft Windows is likely the most well-known and common computer operating system in the world today. It was developed by Bill Gates' Microsoft Corporation.

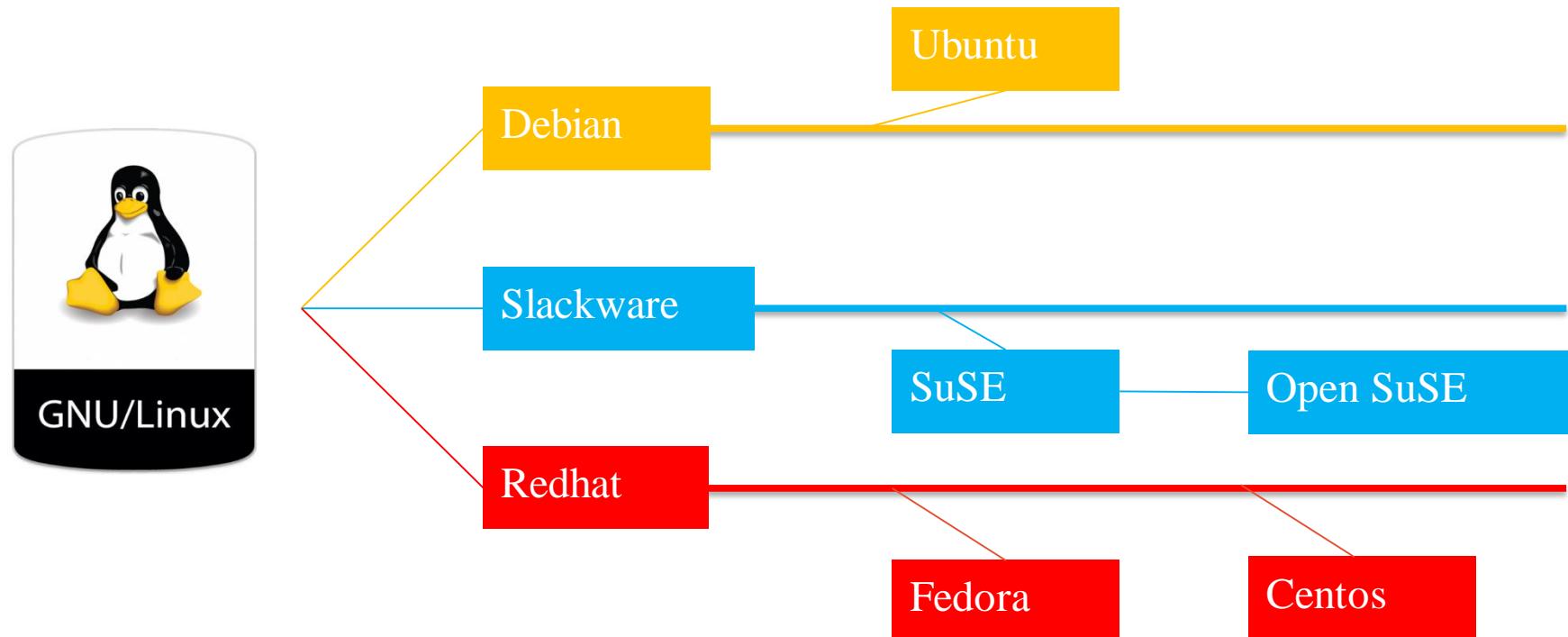


Microsoft

# OS families

## Linux Operating System

Linux was derived from UNIX –derived by Swede Linus Torvalds and released to the public in 1991 under the free and open-source software collaboration. Linux is now used widely by developers who, under the open-source system, can make change to the software to meet their own needs.



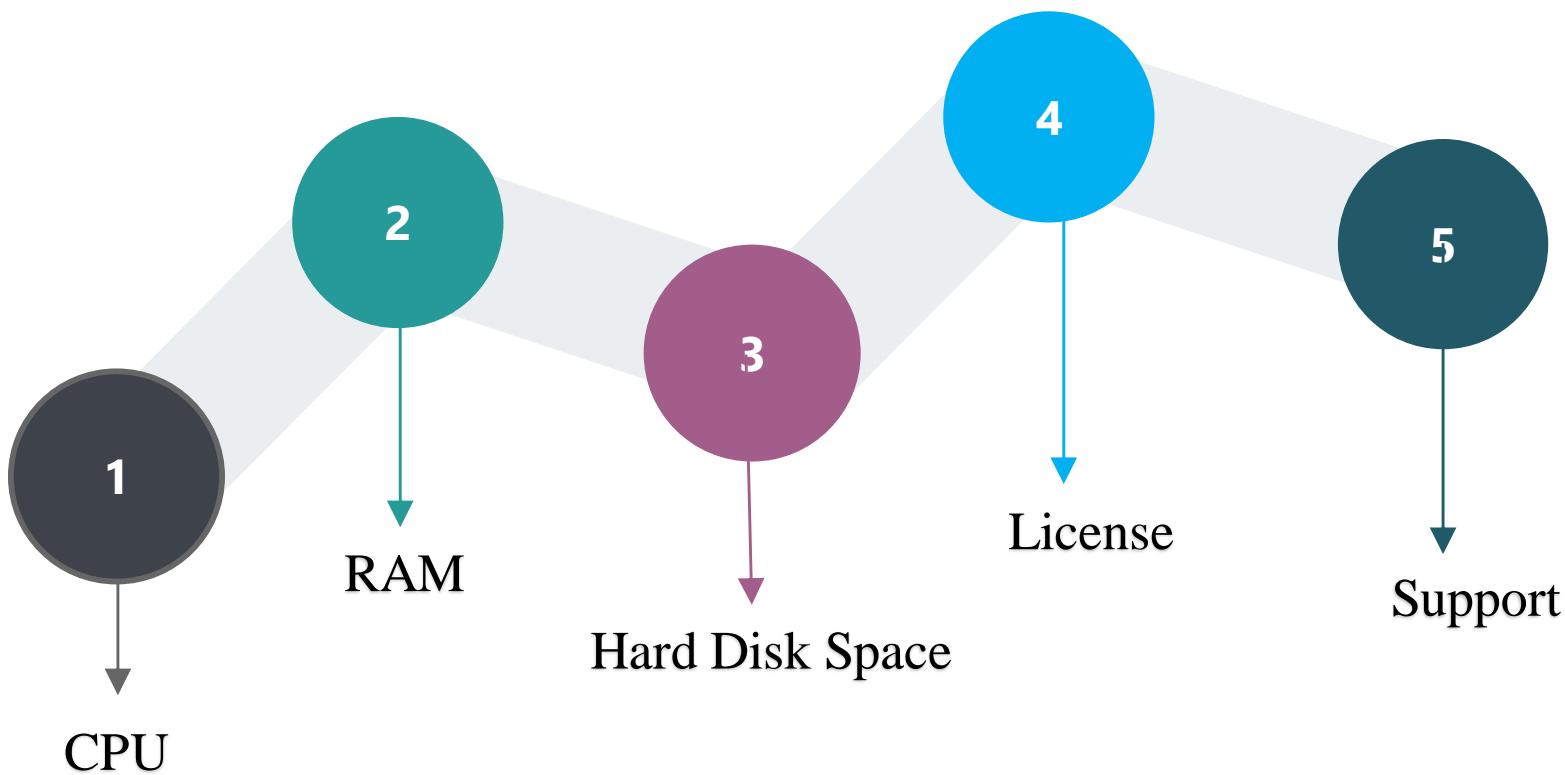
# OS families

## Mac OS

Version	Release Date
Mac OS X v10.0 (Cheetah)	24 <sup>th</sup> March 2001
Mac OS X v10.1 (Puma)	25 <sup>th</sup> September 2001
Mac OS X v10.2 (Jaguar)	2002
Mac OS X v10.3 (Panther)	2003
Mac OS X v10.4 (Tiger)	2005
Mac OS X v10.5 (Leopard)	2007
Mac OS X v10.6 (Snow Leopard)	2009
Mac OS X v10.7 (Lion)	2011
OS X v10.8 (Mountain Lion)	2012
OS X v10.9 (Mavericks)	2013
OS X v10.10 (Yosemite)	2014
OS X El Capitan v10.11	2015
MacOS Sierra v10.12	2016
MacOS High Sierra v10.13	2017

# Hardware Requirements prior to install OS

You can identify differences from one Operating Systems to one Operating Systems by system requirements and characteristics:



# Hardware Requirements prior to install OS

Windows Clients Operating Systems			
Description	Windows 7	Windows 8/8.1	Windows 10
Minimum of RAM	1GB (32-bit)	1GB (32-bit)	1GB (32-bit)
Requirement of RAM	2GB (64-bit)	2GB (64-bit)	4GB (64-bit) or more
Processor (CPU)	1GHz	1GHz or Faster	1GHz or Faster
Hard Disk Space	20GB	20GB	20GB
Free Space	16GB	16GB	16GB
License/Pricing	115 USD	119.99 USD	180 USD
Support	Yes	Yes	Yes

# Hardware Requirements prior to install OS

Windows Servers Operating Systems			
Description	Windows Server 2008	Windows Server 2012	Windows Server 2016
Requirement of RAM	2GB or greater	2GB or greater	4GB or greater
Processor (CPU)	2GHz or Faster	2GHz or Faster	(64-bit processor)
Hard Disk Space	40GB or greater	40GB or greater	Unlimited
Free Space	10GB	32GB	32GB+
License/Pricing	62.18 USD	179 USD	Release for testing
Support	Yes	Yes	Yes

# Hardware Requirements prior to install OS

Linux Operating Systems			
Description	Ubuntu/Debian	Redhat/Centos	Open SuSE
Minimum of RAM	384 MB	256 MB	512 MB
Requirement of RAM	1 GB	1 GB	1GB
Processor (CPU)	700 MHz	500 MHz	500 MHz
Hard Disk Space	15 GB	10 GB	10 GB
Free Space	5 GB	4 GB	4 GB
License/Pricing	Free	96 USD/year	Free
Support	No	Yes	No

## Activity

# OS Scenario

Arrange 5 students per group:

- Group 1 will discuss the exercise 1 in OS Scenario
- Group 2 will discuss the exercise 2 in OS Scenario
- Group 3 will discuss the exercise 3 in OS Scenario
- Group 4 will discuss the exercise 4 in OS Scenario
- Group 5 will discuss the exercise 5 in OS Scenario

OS Scenario, [click here](#)

# Any Questions?

