**ENTOTO TVET COLLEGE**

under



**Ethiopian TVET-System**

INFORMATION TECHNOLOGY

SUPPORT SERVICE

Level I

**LEARNING GUIDE # 7**

Unit of Competence : Install Software Application

Module Title : Installing Software Application

LG Code : ICT ITS1 L03 07

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LO 3: Install or Upgrade Software

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| **Information Sheet 1** | **Installing New or Upgrading Software** |

**What means Upgrading?**

The term **upgrade** refers to the replacement of a product with a newer version of the same product. Common hardware upgrades include (for example) installing additional memory ([RAM](http://en.wikipedia.org/wiki/RAM)), adding larger [hard disks](http://en.wikipedia.org/wiki/Hard_disks), replacing microprocessor cards or [graphics cards](http://en.wikipedia.org/wiki/Graphics_cards), and installing new versions of software.

## What are upgrading Risks?

Although developers produce upgrades in order to improve a product, there are risks involved including the possibility that the upgrade will worsen the product.

Upgrades of hardware involve a risk that **new hardware will not be compatible with other pieces of hardware in a system**. For example, an upgrade of RAM may not be compatible with existing RAM in a computer.

Upgrades of software introduce the risk that the **new version (or patch) will contain a bug, causing the program to malfunction** in some way or not to function at all Upgrades can also worsen a product subjectively. A user may prefer an older version even if a newer version functions perfectly as designed.

**When Should You Upgrade Your PC Software?**

With new versions of the software we use being released regularly; one of the questions we get often is how someone should decide whether they should upgrade their software to the current version.

We generally separate software upgrades into two categories:

1) Service releases or bug fixes and

2) New software versions.

 **For service releases or bug fixes**, we tend to upgrade **as soon as they are released** since they usually make the software more stable and reliable.

**For new software versions**, we should use four criteria to determine whether we want to upgrade:

**1. Is our current version no longer supported?**

As software manufacturers release new software, they no longer support the older versions. Most software companies support the most recent old version and perhaps one more past version, but rarely more than two old versions. To check if your version is supported, you can go to the software maker's website and check the support area. When your software is no longer supported, it may be hard to get answers to questions you have and this can lead to possible delays and frustration if you run into a problem with the software.

**2. Does the new version have some features that will make my work more efficient?**

Almost every software release includes a slew of new features designed to make work more efficient or easier. We should examine the list of new or changed features to see if any will really benefit me.

The answers to the two questions above lead me towards or away from a new version of software. But before we upgrade, we should consider two more factors:

**3. Has the software been out long enough to detect any significant problems?**

We will usually wait 6-12 months after a major new software version is released before upgrading. In the first few months, the software company finds bug that they didn't find when testing it and they prepare a service release or minor upgrade to fix those problems. Usually wait until that first service release is available until you upgrade. This reduces the risk of upgrading and running into significant problems.

**4. Will I run into file format compatibility issues?**

If a software application has changed the file format that the information is saved in, the new files may not be compatible with the old version of the software. This can cause problems when sharing files with colleagues or partners. If the file format has changed, I will wait longer to upgrade in order to ensure that most of the people I will share files with have upgraded and we will reduce the risk of running into file compatibility problems.

**INSTALLING SOFTWARE APPLICATION**

**Computer Program(Application software) Installation**

Some software can be executed by simply copying it to a computer and executing it with no further ado; no installation procedure as such is required. Other programs are supplied in a form not suitable for immediate execution, and require an installation procedure. Installation may include unpacking of files supplied in a compressed form, copying them to suitable locations, tailoring the software to suit the hardware and the user's preferences, providing information about the program to the [operating system](http://en.wikipedia.org/wiki/Operating_system), and so on. The installer may test for system suitability and available [mass storage](http://en.wikipedia.org/wiki/Mass_storage) space.

Some software is designed to be installed simply by copying their files to the desired location, and there is no formal installation process. This was once usual for many programs running under [MS-DOS](http://en.wikipedia.org/wiki/MS-DOS), [Mac OS](http://en.wikipedia.org/wiki/Mac_OS), [Atari TOS](http://en.wikipedia.org/wiki/Atari_TOS), and [Amiga OS](http://en.wikipedia.org/wiki/AmigaOS). This is the "de facto" standard in [Mac OS X](http://en.wikipedia.org/wiki/Mac_OS_X) [applications](http://en.wikipedia.org/wiki/Application_software) and is also used for many [Windows](http://en.wikipedia.org/wiki/Microsoft_Windows) [applications](http://en.wikipedia.org/wiki/Application_software). Windows applications that do not require installation are often times called "portable," as they do not require an installation to run, and may be run for many different computers with only the executable. There are versions of some operating systems which do not require installation and can be run directly from a [bootable](http://en.wikipedia.org/wiki/Bootable) CD, DVD, or [USB drive](http://en.wikipedia.org/wiki/USB_drive). This allows one to test out the operating system without altering the existing setup.

Installation usually implies that once installed, the program can be executed again and again, without the need to reinstall before each execution. Some software does not need installation at all. There is server-based software that mimics locally-installed software, and can be run inside of a web browser, using only the local system's cache. This allows portability among computers with access to the server. This technique is often referred to as [cloud computing](http://en.wikipedia.org/wiki/Cloud_computing).

Common operations performed during software installations include creation or modification of:

* Shared and non-shared program [files](http://en.wikipedia.org/wiki/Computer_file)
* [Folders](http://en.wikipedia.org/wiki/Directory_%28file_systems%29)/[directories](http://en.wikipedia.org/wiki/Directory_%28file_systems%29)
* [Windows registry](http://en.wikipedia.org/wiki/Windows_registry) entries
* [Configuration file](http://en.wikipedia.org/wiki/Configuration_file) entries
* [Environment variables](http://en.wikipedia.org/wiki/Environment_variables)
* [Links or shortcuts](http://en.wikipedia.org/wiki/Computer_shortcut)

## Type of Installations

* **Silent installation**

Installation that does not display messages or windows during its progress. "Silent installation" is not the same as "unattended installation", though it is often improperly used as such.

* **Unattended installation**

Installation that is performed without user interaction during its progress or, in a stricter sense, with no user present at all, except eventually for the initial launch of the process. An installation process usually requires a user who "attends" it to make choices at request: accepting an [EULA](http://en.wikipedia.org/wiki/EULA), specifying preferences and passwords, etc. In graphical environments, installers that offer a [wizard-based interface](http://en.wikipedia.org/wiki/Wizard_%28software%29) are common. However these installers may also provide command line [switches](http://en.wikipedia.org/wiki/Switch_%28command_line%29) that allow performing unattended installations.

**Answer file**

Some unattended installations can be driven by a script providing answers to the various choices such as the answer file which can be used when installing [Microsoft Windows](http://en.wikipedia.org/wiki/Microsoft_Windows) on a large number of machines.

* **Self installation**

Unattended installation, without the need of initial launch of the process (i.e. [Vodafone Mobile Connect USB Modem](http://en.wikipedia.org/wiki/Vodafone_Mobile_Connect_USB_Modem) or [Huawei E220](http://en.wikipedia.org/wiki/Huawei_E220)'s [Mobile Partner](http://en.wikipedia.org/w/index.php?title=Mobile_Partner&action=edit&redlink=1) software that self-installs from the USB port).

* **Clean installation**

Given the complexity of a typical installation there are many factors that may interfere with its successful completion. In particular files that are leftover from old installations of the same program or an unstable situation of the operating system may all act to prevent a given program from installing and working correctly. An installation performed in absence of such interfering factors (which may vary from program to program) is called a clean installation. In particular, a clean operating system installation can be performed by formatting its destination partition before the actual installation process.

* **Flat installation**

An installation of a program performed from a copy (called a *flat copy*) of its original media contents (mostly CDs or DVDs) to a hard drive, rather than directly from the media. This may help in some situations where the target machine isn't able to cope with random access reads from CD/DVD at the same time as performing the CPU-intensive tasks often required by an installation, or where the target machine does not have an appropriate physical drive.

* **Network Installation**

An installation of a program from a shared network drive. This may simply be a copy of the original media (as in a Flat Installation), but frequently, software publishers which offer site licenses for institutional customers provide a version intended for installation over a network.

**Computer Software Installation**

The operating system of your computer is an important factor to be considered when you install any software. The operating system is the program that is contrived to run the computer software on your computer. The operating system is responsible for managing the computer software and hardware. Before you install a computer software, the first important step is to check the configuration of your computer. Also, check the hardware and software requirement of the software you are installing. The configuration of your computer must match the requirements of the software to be installed. Sometimes, the software to be installed is compressed in a .RAR or .ZIP file. In these cases, before you install the software you have to uncompress all the installation files and folders. To uncompress the files and folders, ensure that you have a decompression software application installed on your computer.

 Every computer software comes with a 'Read me' file. This 'Read me' file contains all the instructions that are required to install the software on your computer. Sometimes, when you install a software, the software may ask you to install another program that is required for the proper execution of the software to be installed. The computer may even prompt you to install the supporting software after you complete the installation. When you install any software program on the computer, it is advisable to close all other programs and utilities. Some [antivirus software](http://www.buzzle.com/articles/antivirus-software/) applications may require you to turn off the firewall and disable the antivirus in order to install the software. When installing software applications related to computer networking or web browsing, it is recommended to disable the antivirus and the firewall. Finally, to complete the installation, restart your computer system.

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| **Information Sheet 2** | **Minimal disruption to the client** |

# Minimal disruption to the client

Just like when installing hardware, one important consideration when installing or upgrading software is to try and install the software with minimal disruption to the client.

You could consider the same installation schedule as of hardware maintenance such as:

* quiet periods (for example, during holiday periods)
* before or after normal office hours
* while the client/user is out of the office
* when the client will not be needing their computer

Installation would vary depends on the software to be installed and the hardware speed. You can check your manuals or documented procedures on how much time it would take to install specific software for a specific hardware. You can also check the web on how much time your software installation would take given your hardware.

Once you have know the how much time it would take for the software installation, you can now arranged a suitable time, make sure you adhere to it or give advanced notice if you will be delayed. Remember that clients may have scheduled their daily workload around the installation.

The use of cloning software would be another option when installing the same softwares to several computers that needs to obtain the same softwares. Just make a clean installation of all softwares on one computer then you can clone the other computers to obtain the same softwares at a minimum time. It would be advisable for new computers having the same hardware specifications.

 Once the software installation or upgrade has been done, make necessary update on the software inventory for that particular hardware. Update also the operational procedures on how to install the new version of the software being installed.

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| **Self-Check 1** |  |

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Please ask your trainer for the questionnaire for this Self-check.*