INFORMATION TECHNOLOGY SUPPORT SERVICE

Level - I

LEARNING GUIDE – 32

Unit of Competence:	Install Software Application
Module Title:	Installing Software Application
LG Code:	ICT ITS1 L32 08
TTLM Code:	ICT ITS1 TTLM 0919

LO3: INSTALL OR UPGRADE SOFTWARE

Instruction Sheet	Learning Guide – 32

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –

- Installing New or Upgrading Software
- Minimal Disruption to the client
- Verify client Requirements and Client Satisfaction

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Install new or upgraded software in accordance with appropriate person or organizational instructions

- Complete installation process efficiently and effectively with minimal disruption

- Carry out testing and acceptance in line with corporate guidelines, paying particular attention to possible impact on other systems

- Ensure client requirements are satisfied in accordance with the organizational standard

- Refer outstanding client issues to appropriate person as necessary and organizational templates are prepared

Learning Instructions:

1. Read the specific objectives of this Learning Guide.

2. Follow the instructions described below here.

3. Read the information written in the information "Sheet 1, Sheet 2 and Sheet 3" in page -3-, -9- and -12- respectively.

4. Accomplish the "Self-check 1, Self-check and Self-check 3" in page -7-, 11- and 13- respectively

5. If you earned a satisfactory evaluation from the "Self-check 1,2 and 3" proceed to "Operation Sheet 1 and Operation Sheet 2 " in page -15—and 23 respectively.

6. Do the "LAP test 1 and 2" in page – -22- and 25.

Information Sheet – 1	Learning Guide - Installing New or Upgrading Software

1.1 Upgrading Software

The term upgrade refers to the replacement of a product with a newer version of the same product. It is most often used in computing and consumer electronics, generally meaning a replacement of hardware, software or firmware with a newer or better version, in order to bring the system up to date. Common software upgrades include changing the version of an operating system, of an office suite, of an anti-virus program, or of various other tools.

- **Risks of Upgrading**

  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. Other hardware components may not be compatible after either an upgrade or downgrade, due to the non-availability of compatible *drivers* for the hardware with a specific *operating system*. Conversely, there is the same risk of non-compatibility when software is upgraded or downgraded for previously functioning hardware to no longer function.

  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 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. In addition to the cost of the upgrade, which seems to be rising steadily, there is the hassle factor in using new software - learning the new features or interface, the bugs that inevitably there and the resulting temporary loss of productivity. When we are talking about software, we are referring to both the software drivers that guide the operation of the computer components as well as the application software, such as a word processor or spreadsheet.

  We generally separate software upgrades into two categories:

- Service releases or bug fixes and
- 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:

- **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.

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

  Almost every software release includes 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. Most people never use more than 10-20% of the features of a software package, so new features in that unused 80% are of less interest.

- **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 bugs 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.

- **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.

1.2 Installing Software

Some software can be executed by simply copying it to a computer and executing it with no further argument; 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, and so on. The installer may test for system suitability and available 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*, *Mac OS*, *Atari TOS*, and *Amiga OS*. This is the "de facto" standard in *Mac OS X applications* and is also used for many *Windows applications*. 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* CD, DVD, or *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*.

Common operations performed during software installations include creation or modification of:
- Shared and non-shared program files
- Folders/directories
- Windows registry entries
- Configuration file entries
- Environment variables
- Links or shortcuts

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 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](#) 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.

1.2.1 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*, specifying preferences and passwords, etc.

  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 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 or Huawei E220's *Mobile Partner* 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 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.

Self-Check – 1	Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

_____ 1. Common software upgrades include changing the version of

    A. Operating System   B. Office Suite   C. Anti-Virus Program   D. All

_____ 2. _____ refers to the replacement of a product with a newer version of the same product.

    A. Install   B. Uninstall   C. Upgrade   D. None

_____ 3. For _____, we tend to upgrade as soon as they are released since they usually make the software more stable and reliable.

    A. New software versions

    B. Service releases or bug fixes

    C. Old software versions

    D. All

_____ 4. Which of the following is not software Upgrading Risks?

    A. Upgrade will improve the product

    B. The risk of incompatibility

    C. The new version will contain a bug

    D. All

_____ 5. Windows applications that do not require installation are often called____.

    A. Portable application

    B. Installable application

    C. Server-based software

    D. None

_____ 6. Software installation may include:

    A. Unpacking of files supplied in a compressed form

    B. Providing information about the program to the operating system

    C. Copying them to suitable locations

    D. All

Information Sheet – 2	Minimal Disruption to the client

2.1 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 known 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 software's to several computers that needs to obtain the same software's. Just make a clean installation of all software's on one computer then you can clone the other computers to obtain the same software's at a minimum time. It would be advisable for new computers having the same hardware specifications.

After completing essential verification of suitability of hardware and software according to supervisor's instructions, you have to work out when will be the most suitable time to install the software. The major point which you need to consider is to ensure that the installation process will minimize client disruption.
To achieve that, it is recommended you approach the software installation process in a structured way. That is:

- Establish the approximate time for the installation (include time to resolve problems which may arise during installation)
- Discuss with your client when the projected time for installation will cause minimal disruption to the organization's operation
- Organize resources required to record:
  - ✓ any problems which may arise during installation
  - ✓ a specific options or customized configurations implemented during installation
- Organize resources required during installation process e.g. troubleshooting disks, startup disks, backup disks, license number and registration number

- Organize access to information about previous installations or environment for new software which may be required during installation process. For example, if you install an upgrade from Windows 95 to Windows 98 and your customer also upgraded a hard disk to a new faster and larger hard disk and the old version of Windows is no longer installed, you need an access to original licensed disks of Windows 95 which will be required during installation.

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.

2.2 Test Procedures

Computer Support Officer – The person who receives a technology-free statement of the user requirements and transforms it into a computer system.
- Installs and tests the software.

Once the software has been installed you need to check out its correct operation. Testing procedures used will depend on the type of software being installed. However, for each type of software there are three basic functions which should be tested:
- Starting software
- Software operation
- Closing software

Starting software may involve provision of instructions on how to start the software. It may also involve creation of shortcuts to simplify access to the software.

Testing software operation will require testing data. Data selected for testing purpose should involve use of fundamental features of the software to demonstrate their correct operations.

Closing software will demonstrate the conclusion of the full cycle software operation. Testing all three stages will confirm that there are no side effects in operation of any part of the software. Such are usually the responsibilities of the Computer Support Officer.

Self-Check – 2	Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. The use of _____ software would be another option when installing the same software's to several computers that needs to obtain the same software's.

A. cloning   B. Installing   C. Copping   D. All

TRUE or FALSE

1. Installation wouldn't vary depends on the software to be installed and the hardware speed.

2. Closing software will demonstrate the conclusion of the full cycle software operation.

3. Once the software installation or upgrade has been done, make necessary update on the software inventory for that particular hardware.

Note: **Satisfactory rating - __ points   Unsatisfactory - below ___ points**

You can ask your teacher for the copy of the correct answers.

Information Sheet – 3	Verify client Requirements and Client Satisfaction

3.1 Verify Client Requirements and Client Satisfaction

The last step which you have to do to complete the software installation process is to verify client requirements.

Your client has invested in the software you installed, so you have to demonstrate to your client that the program indeed does what it is supposed to do. Such a demonstration will strongly depend on the type of software you install.

You also have to consider the level of customer's skills in operating the software. For a beginner, you will demonstrate the very basic steps, such as how to get started and close the software. It is also recommended that you provide some information about the appropriate training for beginners. Some companies may provide staff trainer.

Staff Trainer
- Responsible for training all staff in the use of the new software.
- Provides documentation for users and ongoing support.

For more advanced users, your demonstration should display the use of features matching the client's initial requirements.

Any demonstration which you wish to do should be planned, prepared and tested in advance, prior to installation of the software. Performing an unplanned demonstration may lead to basic errors which may make your customer question the quality of your work.

You should also be aware that some software programs are very complex or may contain many components (e.g. integrated software). In such cases, conducting a demonstration covering every element of the client's requirement would not be practical because it may take very long time. If such programs contain some kind of built-in demonstration, you should make your customer aware of this feature.

The last, and probably the most important way of ensuring client satisfaction is to provide immediate help or support in a case of emergency (Using the Help Desk Staff or Computer Support Officer).

Unfortunately, problems with software happen quite frequently. The most frequent problems with software are generated by inappropriate usage.

Sometimes problems with software may arise due to hardware malfunction, and occasionally problems can be generated by incorrectly written software (software bugs). However, since you installed the software most customers will assume that you are responsible for all problems they experience. If you (and your organization) value a customer and wish to continue providing service, you have to ensure that your client can contact you and report any problems. You also have to respond to these problems and provide a solution as soon as you can.

Self-Check – 3	Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

TRUE or FALSE

1. In operating the software, for an experienced user you will demonstrate the very basic steps, such as how to get started and close the software.

2. Problems with software happen quite frequently. The most frequent problems with software are generated by inappropriate usage.

3. Sometimes problems with software may arise due to hardware malfunction, and occasionally problems can be generated by incorrectly written software (software bugs).

Note: **Satisfactory rating - __ points   Unsatisfactory - below ___ points**

You can ask your teacher for the copy of the correct answers.

Answer Sheet

Name: _____   Date: _____

| Operation Sheet – 1	Installing or Upgrading Software

1.1 How to Install Windows 7

This step-by-step guide demonstrates how to install Windows 7 Ultimate. The guide is similar for other versions of Windows 7 such as Home Premium…..

The best way to install Windows 7 is to do a clean install. It is not difficult to perform a clean installation. Before you start the installation process I recommend that you check Windows 7 System Requirements list to ensure that your hardware is supported by Windows 7. If you don't have Windows 7 drivers for all your hardware, it is a good idea to download all the drivers from the hardware manufacturer's website and save all the necessary drivers on a CD-R or a USB drive before you start the installation.

Windows 7 DVD is bootable. In order to boot from the DVD you need to set the boot sequence. Look for the boot sequence under your BIOS setup and make sure that the first boot device is set to CD-ROM/DVD-ROM.

Step 1 - Place Windows 7 DVD in your DVD-Rom drive and Restart your PC. Windows 7 will start to boot up and you will get the following progress bar. And change boot order to CD/DVD drive from BIOS setting.

Step of entering to BIOS vary from computer to computer ask your teacher to show you how to enter BIOS configuration. When correctly boot from CD/DVD the following screen shows.
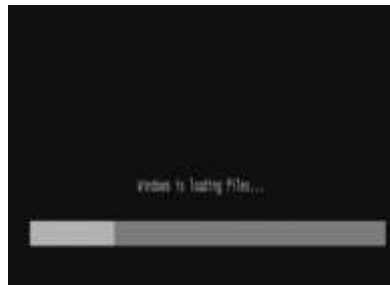
Step 2 - The next screen allows you to setup your language, time and currency format, keyboard or input method. Choose your required settings and click next to continue.

Step 3 - The next screen allows you to install or repair Windows 7. Since we are doing a clean install we will click on "install now".

Step 4 - Read the license terms and tick I accept license terms. Then click next to continue.


Step 5 - You will now be presented with two options. Upgrade or Custom (Advanced). Since we are doing a clean install we will select Custom (Advanced).


Step 6 - Choose where you would like to install Windows 7. If you have one hard drive you will get a similar option to the image below. You can click next to continue. If you have more that one drive or partition then you need to select the appropriate drive and click next. If you need to format or partition a drive then click Drive options (advance) before clicking next.
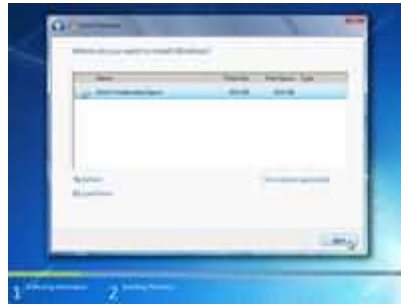
Step 7 - Windows 7 starts the installation process and starts copying all the necessary files to your hard drive as shown on the image below.
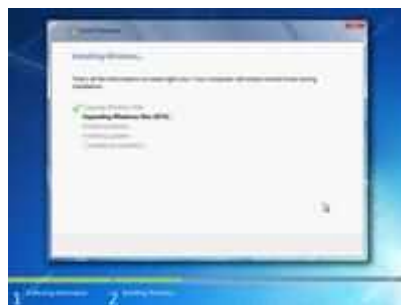
Step 8 - It will go through various stages of the setup and will reboot your system few times.
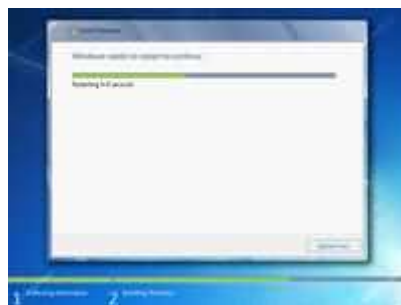
Step 9 - When your PC reboots it attempts to boot from DVD as its the first boot device. Do not press any key during the boot prompt so Windows 7 will continue with the installation by booting from the hard drive.

Step 10 - After the reboot your computer will be prepared for first use.

Step 11 - At this stage you need to choose a user name and computer name. Click next to continue. The user account you create here is the Administrator account which is the main account for your Windows 7 that has all the privileges.


Step 12 - Choose your password and password hint just incase you forget your password and need to jog your memory.

Step 13 - You can now type the product key that came with Windows 7 and click next. If you do not enter the product key you can still proceed to the next stage. However Windows 7 will run in trial mode for 30 days. You must therefore activate Windows within 30 days otherwise you can not access your computer after 30 days.

Step 14 - Help protect your computer and improve Windows automatically. Choose Use recommended settings.
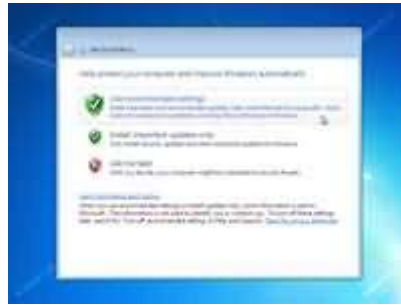
Step 15 - Review your time and date settings. Select your time zone, correct the date and time and click next to continue.

Step 16 - Select your computer's current location. If you are a home user then choose Home network otherwise select the appropriate option.

Step 17 - Windows will now finalize the settings for your computer and restart.

Step 18 - After the final restart Windows 7 will start to boot up.

Step 19 - Finally you have the logon screen. Just type your password and press enter or click on the arrow to logon to Windows 7 for the first time.


Step 20 - After you have logged on to Windows 7 for the first time, you will see similar desktop to the image below. At this point you can start using your computer. However it may not be fully configured. You need to make sure that all the hardware is detected correctly and the necessary device drivers are installed. This can be done from the device manager.


Step 21 - To go to device manager click - Start Menu -> Control Panel -> System and Security -> System -> Device Manager. You will see all your hardware listed as shown on the image below. You need to check if you have any yellow exclamation marks next to the name of the devices, similar to "Multimedia Audio Controller" on the image below. This indicates that the driver has not been installed for this device.

At this stage you can install the driver for this device. To do so, Right Mouse click on Multimedia Audio Controller -> Update Driver Software...
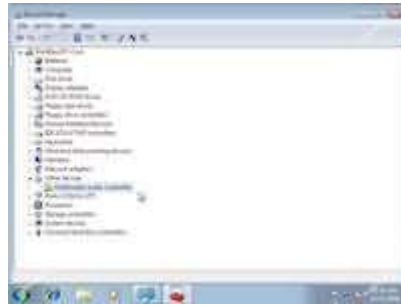
Step 22 - You can choose to "Search automatically for updated driver software" or "Browse my computer for driver software". If you have the driver CD or if the driver is on a USB drive then choose "browse my computer for driver software". Window 7 will search and install the driver from the CD or you can locate the driver manually.

Once you have removed all the yellow exclamation marks from the device manager your Windows 7 configuration would be fully complete.
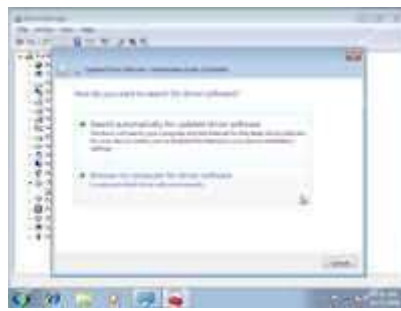
Step 23 - Finally check if you have successfully activated Windows 7. Click Start Menu -> Control Panel -> System and Security -> System. You will get a window similar to the image below. Towards the bottom you will see Windows is activated followed by your product ID. This shows that your copy of Windows 7 is fully activated.
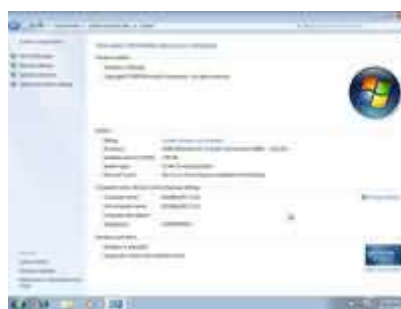
LAP Test-1	Practical Demonstration

Name: _____   Date: _____

Time started: _____   Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within --- hour.

1. You need to successfully **Install** Window 7 Ultimate Using the following condition.

- Make Partition your hard disk into 3 equal parts (C, D and E).
- Install Window 7 on D: Partition.

Operation Sheet – 2	Installing Application Program

2.1 Install a Program

How you add a program depends on where the installation files for the program are located. Typically, programs are installed from a CD or DVD, from the Internet, or from a network.

To Install a Program from a CD or DVD

- Insert the disc into your computer and follow the instructions on your screen. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.

- Many programs installed from CDs or DVDs launch an installation wizard for the program automatically. In these cases, the AutoPlay dialog box will appear and you can choose to run the wizard.

- If a program doesn't begin to install, check the information that came with the program. This information will likely provide instructions for installing the program manually. If you cannot access the information, you can also browse through the disc and open the program setup file, usually called Setup.exe or Install.exe.

To Install a Program from the Internet

- In your Web Browser, click the Link to the program.

- Do one of the following:

    - ✓ To install the program immediately, click Open or Run and follow the instructions on your screen. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.

    - ✓ To install the program later, click Save and download the installation file to your computer. When you are ready to install the program, double-click the file and follow the instructions on your screen. This is a safer option because you can scan the installation file for viruses before you proceed.

Note

✓ When downloading and installing programs from the Internet, be sure you trust the publisher of the program and the website that is offering the program.

2.2 Uninstall or Change a Program

You can uninstall a program from your computer if you no longer use it or if you want to free up space on your hard disk. You can use Programs and Features to uninstall programs or to change a program's configuration by adding or removing certain options.

- Click on **Start,** then click on **Control Panel**
- Click to open **Programs and Features**.
- Select a **Program**, and then click **Uninstall**.

  Some programs include the option to change or repair the program in addition to uninstalling it, but many simply offer the option to uninstall.

  ✓ To change a program, click **Change** or **Repair**. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.

  Notes

  ✓ If the program you want to uninstall is not listed, it might not have been written for this version of Windows. To uninstall the program, check the information that came with the program.

LAP Test- 2	Practical Demonstration

Name: _____   Date: _____

Time started: _____   Time finished: _____

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks within --- hour.

1. You need to successfully **Install** the following application software's.

    A. Adobe Acrobat Reader

    B. Microsoft Office 2007

2. You need to successfully **Uninstall** the following application software's.

    A. Adobe Acrobat Reader

    B. Microsoft Office 2007

List of Reference Materials

Reference

https://www.quora.com/What-is-the-difference-between-upgrade-and-update

https://www.intowindows.com/how-to-upgrade-office-2007-to-office-2010/

Posted by Synopsys Editorial Team on Friday, October 7th, 2016
https://www.synopsys.com/blogs/software-security/5-types-of-software-licenses-you-need-to-understand/

Experts

The development of this Learning Gide for the TVET Program Information technology support service Level I.

No	Name of Trainers	Phone Number	E-mail Address	Region
1	Abdulakim Ahmed	0921900418	Hikmaharar@gmail.com	Harari
2	Assefa Million	0911034866	amen192005@gmail.com	Harari
3	Derese Teshome	0913938439	dereseteshome@gmail.com	AA
4	Getenesh Osamo	0923816933	gete.osamo@gmail.com	SNNPR
5	Remedan Mohammed	0913478937	remedanm77@gmail.com	Harari
6	Sewayehu W/Yohanes	0911716733	Baroke0816@gmail.com	SNNPR
7	Damelash Yihalem	0911912015	demenati@gmail.com	Harari