INFORMATION TECHNOLOGY SUPPORT SERVICE

Level - I

LEARNING GUIDE – 30

Unit of Competence:	Install Software Application
Module Title:	Installing Software Application
LG Code:	ICT ITS1 L30 08
TTLM Code:	ICT ITS1 TTLM 0919

LO1: Determine Software and Upgrade Requirements

Instruction Sheet	Learning Guide – 30

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

- Documenting and reporting Client Requirements for Installation of the Software
- Acting on instruction to meet clients requirement

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 –

- Document and report client requirements to appropriate person in accordance with the workplace standard.
- Act on instructions to meet client requirements in line with organizational requirements.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.

2. Follow the instructions described below in page _2_.

3. Read the information written in the information "Sheet 1 and Sheet 2," in page -3-, and -13 respectively.

4. Accomplish the "Self-check 1 and Self-check 2," in page -4- and -18- respectively

5. If you earned a satisfactory evaluation from the "Self-check 1" proceed to "Operation Sheet 2," in page -13-.

Information Sheet 1	Documenting and reporting Client Requirements

1.1. Introduction to Computer Software

Computer software is a collection of computer programs and related data that provide the instructions for telling a computer what to do and how to do it.

In other words, software is a conceptual entity which is a set of computer programs, procedures, and associated documentation concerned with the operation of a data processing system.

We can also say software refers to one or more computer programs and data held in the storage of the computer for some purposes. In other words software is a set of programs, procedures, algorithms and its documentation.

Computer software has facilitated the interaction between human beings and computers. What are the different kinds of software?

Software refers to the computer programs, procedures and documentation that perform certain tasks on a computer system. Following is an extensive list of examples of the different kinds of software.

- **Application Software:** Application software is that, which is designed for the end-users and hence known as end-user programs. It employs the capabilities of a computer to execute the tasks that the user wishes to perform on a computer system. Look at the various examples of application software.

- **Educational Software:** They are used to deliver tests and track progress. They are used for educational purposes. Training management and classroom management software are some examples of educational software. The software used for purposes of edutainment, a form of entertainment that aims at educating the masses, is also a form of educational software.

- **Enterprise Software:** It caters to the needs of organization processes and data flow. Customer relationship management and supply chain management software are the well-known examples of enterprise software. Enterprise infrastructure software supports the enterprise software systems.

- **Information Worker Software:** It caters to the needs of an individual to manage information pertaining to a project or a single department. Resource management software and documentation tools are some of the popularly used information worker software.

- **Media Development Software:** They are used for the generation of print and electronic media in the educational and commercial sector. Image organizers and image editing software, animation software like Flash, audio and video editors as well as the web development software are some well-known examples of media development software.

- **Product Engineering Software:** This software is used in the development of hardware and software products. Application programming interfaces and integrated development environments are the well-known examples of product engineering software. Program testing tools, debuggers, compilers and CAD are some of the other instances of product engineering software.

- **Simulation Software:** They are used for the simulation of physical and abstract systems. Computer simulators that are used for simulating scientific concepts and social ideas,

battlefield, vehicle and flight simulators are some of the popular examples of simulation software.

- **Programming Software:** Programming Languages are used to write programs that control the functioning of a computer system. They are the building blocks of computer applications. Go through the complete list of the different programming languages.

- **System Software:** It is computer software that manages and controls hardware in order to enable application software to perform its tasks. System software performs the functions like transferring data from memory to the disk or delivering text onto a display device.

- **Device Drivers:** They are computer programs, which facilitate the interaction of high-level computer programs with the hardware devices. Drivers also provide interrupt-handling mechanisms.

- **Network Managers:** They check computer networks, data transfers and log events.

- **Virus Scanners:** They scan for viruses on a computer system. They are widely known as antivirus software.

- **Content-Control Software:** It refers to the software designed for controlling the content that is permitted for the user to access. It can determine what content will be available on a particular machine or network. Content-control software is commonly used at homes and in schools to restrict the content that can be accessed over the net by the students.

- **Data Recovery Software:** Apart from the facilities of copying of data files, data recovery software supports the user needs of backing up important computer data. It allows the user to specify what is to be backed up and when.

1.1.1. Types of Computer Software

The two major types the computer software

- **System Software**: It helps in running the computer hardware and the computer system. System software is a collection of operating systems; device drivers, servers, windowing systems and utilities. System software helps an application programmer in abstracting away from hardware, memory and other internal complexities of a computer.
- **Application Software**: It enables the end users to accomplish certain specific tasks. Business software, databases and educational software are some forms of application software. Different word processors, which are dedicated for specialized tasks to be performed by the user, are other examples of application software.

1.1.2. Types of Application Software

What is application software? What are the different types of application software? Know it all along with some interesting examples of application software.

Application software utilizes the capacities of a computer directly to a dedicated task. Application software is able to manipulate text, numbers and graphics. It can be in the form of software focused on a certain single task like word processing, spreadsheet or playing of audio and video files.

Different Types of Application Software are:

- **Word Processing Software:**

This software enables the users to create and edit documents. The most popular examples of this type of software are MS-Word, WordPad, Notepad and some other text editors.

- **Database Software:**

Database is a structured collection of data. A computer database relies on database software to organize the data and enable the database users to achieve database operations. Database software allows the users to store and retrieve data from databases. Examples are Oracle, MS Access, etc.

- **Spreadsheet Software:**

Spreadsheet software allows users to perform calculations. They simulate paper worksheets by displaying multiple cells that make up a grid. Excel, Lotus 1-2-3 and Apple Numbers are some examples of spreadsheet software.

- **Multimedia Software:**

They allow the users to create and play audio and video media. They are capable of playing media files. Audio converters, players, burners, video encoders and decoders are some forms of multimedia software. Examples of this type of software include Real Player and Media Player.

- **Presentation Software:**

The software that is used to display information in the form of a slide show is known as presentation software. This type of software includes three functions, namely, editing that allows insertion and formatting of text, methods to include graphics in the text and a functionality of executing the slide shows. Microsoft PowerPoint is the best example of presentation software.

1.2. System Requirements for Software Installation

To be used efficiently, all computer software needs certain hardware components or other software resources to be present on a computer. These pre-requisites are known as system requirements and are often used as a guideline as opposed to an absolute rule. Most software defines two sets of system requirements: minimum and recommended.

- **Minimum specifications** are the absolute minimum requirements for hardware you should have in your system in order to install and run the OS you have chosen.

- **Recommended hardware specifications** are what you should have in your system to realize usable performance.

- Always try to have the recommended hardware (or better) in your system. If you don't, you may have to upgrade your hardware before you upgrade your OS.

- Make sure you have a good margin between your system's performance and the minimum requirements.

- Always run Windows on *more* hardware, rather than less!

- **Recommended requirements** are almost always of a significantly higher level than the minimum requirements, and represent the ideal situation in which to run the software. Generally speaking this is a better guideline than minimum system requirements in order to have a fully usable and enjoyable experience with software.

1.2.1. Hardware Requirements

The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware. A hardware requirements list is often accompanied by a Hardware Compatibility List (HCL), especially in case of operating systems. A hardware compatibility list is a database of hardware models and their compatibility with a certain operating system. An HCL lists tested, compatible, and sometimes incompatible hardware devices for a particular operating system or application.

The following sub-sections discuss the various aspects of hardware requirements.

- **Architecture**

All computer operating systems are designed for particular computer architecture. Most software applications are limited to particular operating systems running on particular architectures. Although architecture-independent operating systems and applications exist, most need to be recompiled to run on a new architecture.

- **Processing Power**

The power of the Central Processing Unit (CPU) is a fundamental system requirement for any software. Most software running on x86 architecture define processing power as the model and the clock speed of the CPU. Many other features of a CPU that influence its speed and power, like bus speed, cache, and MIPS are often ignored. This definition of power is often erroneous, as AMD Athlon and Intel Pentium CPUs at similar clock speed often have different throughput speeds.

- **Memory**

All software, when run, resides in the Random Access Memory (RAM) of a computer. Memory requirements are defined after considering demands of the application, operating system, supporting software and files, and other running processes. Optimal performance of other unrelated software running on a multi-tasking computer system is also considered when defining this requirement.

- **Secondary Storage**

Hard-disk requirements vary, depending on the size of software installation, temporary files created and maintained while installing or running the software, and possible use of swap space (if RAM is insufficient).

- **Display Adapter**

Software requiring a better than average computer graphics display, like graphics editors and high-end games, often define high-end display adapters in the system requirements.

- **Peripherals**

Some software applications need to make extensive and/or special use of some peripherals, demanding the higher performance or functionality of such peripherals. Such peripherals include CD-ROM drives, keyboards, pointing devices, network devices, etc.

1.2.2. Software Requirements

Software requirements deal with defining software resource requirements and pre-requisites that need to be installed on a computer to provide optimal functioning of an application. These requirements or pre-requisites are generally not included in the software installation package and need to be installed separately before the software is installed.

- **Platform**

In computing, a platform describes some sort of framework, either in hardware or software, which allows software to run. Typical platforms include a computer's architecture, operating system, or programming languages and their runtime libraries.

Operating system is one of the first requirements mentioned when defining system requirements (software). Software may not be compatible with different versions of same line of operating systems, although some measure of backward compatibility is often maintained. For example, most software designed for Microsoft Windows XP does not run on Microsoft Windows 98, although the converse is not always true.

- **APIs and Drivers**

Software making extensive use of special hardware devices, like high-end display adapters, needs special API or newer device drivers. A good example is DirectX, which is a collection of APIs for handling tasks related to multimedia, especially game programming, on Microsoft platforms.

- **Web Browser**

Most web applications and software depending heavily on Internet technologies make use of the default browser installed on system. Microsoft Internet Explorer is a frequent choice of software running on Microsoft Windows, which makes use of ActiveX controls, despite their vulnerabilities.

1.2.3. Other Requirements

Some software also has other requirements for proper performance. Internet connection (type and speed) and resolution of the display screen are notable examples.

1.3. System Requirement to Install Operating System

These are the minimum requirements for basic functionality. Actual requirements vary, depending on the system configuration and the programs and features that you choose to install. In installing new software, it is necessary to know its hardware requirements before installing. You can check from the manufacturer, the accompanied read me file or on the web. Here are some hardware requirements for some common operating system software:

The System Requirements for Windows XP

- Pentium 233-megahertz (MHz) processor or faster (300 MHz is recommended)
- At least 64 Megabytes (MB) of RAM (128 MB is recommended)
- At least 1.5 Gigabytes (GB) of available space on the hard disk
- CD-ROM or DVD-ROM drive
- Keyboard and a Microsoft Mouse or some other compatible pointing device
- Video adapter and monitor with Super VGA (800 x 600) or higher resolution
- Sound card
- Speakers or headphones

The System Requirements for Windows 7

- 1 Gigahertz (GHz) or faster 32-bit or 64-bit processor.
- 1 Gigabyte (GB) RAM (32-bit) or 2 GB RAM (64-bit).
- 16 GB available hard disk space (32-bit) or 20 GB (64-bit).
- DirectX 9 graphics device with WDDM (Windows Display Driver Model) 1.0 or higher driver.
- CD-ROM or DVD-ROM drive
- Keyboard and a Microsoft Mouse or some other compatible pointing device
- Video adapter and monitor with Super VGA (800 x 600) or higher resolution
- Sound card
- Speakers or headphones

1.4 Determining Client Requirements

The installation of new software or a software upgrade involves a number of carefully planned activities and people who specialize in the installation of computer applications. These activities begin with the initial request from the client for new software or a software upgrade. Once the client's request has been evaluated, the computer supports person first analyses:

- The system components including the capabilities of the client's computer
- The processes that manipulate the data
- The current system deficiencies
- The system constraints
- The specific objectives and the performance requirements of the new system
- The corporate desktop software used by the organization.

The next step is to determine and recommend hardware and software components that will satisfy the client's information needs and comply with the stated constraints. There are two questions that you must answer before any recommendations can be made.

- Is it possible to solve the problem?
- Can the organization afford to solve the problem?

Other things that need to be considered include timeframe, cost, technical, legal, environmental, hardware, software, human, organizational and operational implications.

Every client has different needs and therefore there will be considerable variation in the factors which go towards installing new software or software upgrade. Among these variations are software, licensing and organizational considerations.

- **Software**

Variables for new software and upgrade requirements includes software versions, commercial software applications, organization-specific software, operating systems, network operating systems, stand-alone PC systems, word processing, spreadsheets, database, graphics, communication packages, software installation instructions and manuals and the range of suppliers. The relationship between you and the client, and ease of access to them, will vary; often it will be easier to work with another department within an organization than with a client.

- **Licensing**

A supplier of software does not sell you the software; you receive a license to use the software only. Therefore you must determine if the client has a current valid license to use the software. In some cases the organization may have a site license, where any computer belonging to the organization may use the software. In other cases there may be a limited number of licenses for specific computers.

- **Organizational Requirements**

Variables include contracting arrangements relating to information technology, purchasing procedures, licensing requirements and supplier options, storage and retrieval of product licenses, storage of information technology equipment and documentation and retrieval of product licenses. In addition:

- Development methods and tools will vary from very simple procedures to very advanced computer-assisted software engineering (CASE) tools

- Hardware variables common to personal computers and networks include disk space, RAM, CPU and the operating system
- Occupational health and safety standards will vary according to company, government and vendor requirements. Ergonomic and environmental factors must be considered.
- Organizational standards may be based upon formal, well-documented methodologies
- Budget constraints will limit the options available for new software.

Before you can determine new software or software upgrade requirements for a client, you need to examine their current software and hardware environment.

Self-Check – 1	**Test**

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

_____ 1.What is the recommended requirement of Processor (CPU) for installing Windows 7?
    A. 233 GHz   B. 1 GHz   C. 233 MHz   D. 1 MHz
_____ 2.What is the minimum requirement of Memory (RAM) for installing Windows 7 (32-bit)?
    A. 64 MB   B. 128 MB   C. 1 GB   D. 2 GB
_____ 3. Which one of the following is an example of computer software?
    A. Educational Software   B. Enterprise Software   C. Simulation Software   D. All
_____ 4. Which one of the following is NOT an example of application software?
    A. Word Processor   B. Spreadsheet   C. Database   D. Operating System
_____ 5. Which one of the following is an example of system software?
    A. MS Excel   B. MS Word   C. Operating System   D. Media Player
_____ 6. Windows 7 is an example of _____ software?
    A. Device Driver   B. Operating System   C. Application Software   D. Server

Note: Satisfactory rating -___points   Unsatisfactory – below__ points

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

Answer Sheet

Score = _____
Rating: _____

Name: _____   Date: _____

Information Sheet 2	Act on instructions to meet client requirements

2.1 The Main Participants in the Installation of Software

There are a number of different people involved in the installation of software, whether it is a new license or upgrades to existing licenses. The degree of their involvement will depend on the complexity and extent of software applications being installed.

The main participants in the installation of new software include:
- **Clients or End-Users** - the people or group of people for whom the software is being installed. You interview them in order to find out what software they currently have, and their information needs.
- **Supervisor**- the person concerned with the overall management and allocation of support resources, and of all the technical staff working on the project. They communicate with the clients and make sure that they are happy with the service being provided. They are kept informed of the client's requirements.
- **Computer Support Officer** - the person who receives a technology-free statement of user requirements from the client and transforms it into a working computer system that will fulfill the client's computer and business needs. Their role is to install and thoroughly test the software and hardware before handing it over to the client.
- **Staff Trainer** - responsible for training all the staff in the use of the new software and for providing documentation for users to support them with the ongoing use of the software
- **Help Desk Staff** - their main task is to provide timely advice (usually over the telephone) to users in the operation of the hardware and software in use
- **Network Specialist** - the person involved with implementing and maintaining the network.

Client Involvement

It is a common belief amongst experienced systems analysts that the biggest single factor which determines the success or failure of a system is the amount of client involvement that occurred when determining the users' requirements. Input by the users does not stop at the initial investigative phase. Users need to be involved in all stages of installation and they serve as a reliable information source. Successful projects have strong and well communicated commitment on the part of the users. User involvement should ensure that:
- All the user's requirements are met in the initial investigative phases. These requirements include the information to be produced by an information system for their everyday work. For example, the system must be easy to use and produce the required information within acceptable timeframes.
- Users, including the organization's management, review the software documents and other relevant reports during installation. Management

requires progress reports, business goals and estimates of resource usage, costs and completion times. Management must be convinced that their funds and resources are utilized in the best possible way. This will ensure that the users will accept the software once it is operational.

- The users are adequately trained with the new software before it is installed. This means that they must be familiar with the software to a level which allows them to independently use it in their everyday work in order to fulfill their information needs.

Management Levels

Clients from different levels of management have different interests in software applications. Strong client support and involvement and wise user decisions are essential to successful installation and use of software applications. Users should be involved to different degrees and in different ways depending on the managerial hierarchy.

Top-level management is involved with:
- Providing initiative and support for the installation of new software
- The appointment of a supervisor
- Ensuring compatibility of the new systems functions and objectives with the business objectives for the organization
- The allocation of resources and approval of budgets
- The monitoring of progress by review at major checkpoints
- Making decisions from alternatives, making trade-offs and considering relative costs and benefits
- Satisfaction with the system on the part of all other types of users
- Ensuring that organizational guidelines on purchasing hardware and software are followed.

Middle-level management is involved with:

- Receipt of regular progress reports so that they can monitor progress and make decision: to abort or continue
- Appointing a contact person to deal with the needs of the vendor
- Ensuring that software purchased is of appropriate scope for correct and detailed support of operations and meets the organization's guidelines
- Advising on managerial requirements that will ultimately assist in effective decision making
- Approving the purchase of software licenses and indicating the account from which the money will come
- Ensuring the smooth integration of manual and automated procedures
- Ensuring adequate training and documentation for hands-on users.

Lower-level management is involved with:

- Providing relevant information during the data-gathering phases concerned with the functions that the software application will perform

- Reviewing various user interface designs such as screen forms and reports
- Assisting system testing and conducting acceptance testing when requested to do so
- Receiving training when required and reading all appropriate user manuals
- Ensuring that the supplied documentation is available and kept up-to-date
- Reporting all problems once the system is operational
- Making valid suggestions for enhancements and modifications to the new system.

2.2 Documenting and Reporting

There are many documents that need to be produced and exchanged between clients and suppliers of software applications. Two important documents that are exchanged at the initial stages are the Project Request form and the Feasibility Report. The Project Request form outlines the general requirements of the client. The Feasibility Report determines if the client's needs can be met. Included in the Feasibility Report are possible software applications, their costs, benefits and impact on the organization.

Although the initial request for change may be verbal, it is formalized using a Project Request form. This is the first official item of documentation that the user must submit to the organization installing the software. Below is a description and an example of the Project Request Form.

2.2.1 Project Request Form

- **Problem Definition**

The user defines the nature of the problems and briefly describes aspects of the current system, for example, that the existing system is not coping with the daily volume of work. The user may outline the requirements (or a wish list) for the new system.

The analyst gathers information on the nature of the problems using various data-gathering techniques, eg interviews, surveys, reports, procedure manuals and observations.

- **Business Objectives**

This is where the user indicates what the business objectives are. The system built will have to meet these objectives.

- **Anticipated Benefits**

The user defines what they think the benefits would be if a change in the terms of software-for example savings in cost/labor/time, improved customer satisfaction, improved reports to management-were undertaken.

- **Scope of the System**

This section outlines what areas of the business (ie subsystems) will be affected. Constraints and limitations are also defined here, for example, budget limits, time frames, legal constraints, environmental constraints, interfaces to other systems and so on.

Table: 1 Project Request Form

Project Request Form					
Project Title	**Accounts**				
Date Received	**1/1/98**	**Completion Date**	**1/I/99**	**Project No.**	**18/97**
Description of Problems					
Our current system is manual. It is slow and labor intensive. Records are occasionally lost due to files being misplaced, and totals are often incorrect due to human error. The system does not allow us to track important accounts payable and receivable information. For example it is not easy to track outstanding amounts owed to us, and therefore we are losing money.					
Solution Adequacy					
90 % of immediate retrieval of accounts information 100 % accuracy in totals and reports Ability to track outstanding debtors and creditors information					
Anticipated Benefits					
Records are consistent, accurate and easily retrieved Timely and informative reports to assist with decision making Less paperwork and manual calculations Easier to pinpoint trouble spots, eg overdue accounts Back-up procedures in place Improved image with customers and suppliers Improved staff morale					
Scope and Constraints					
Accounts payable and receivable systems Needs to interface to on-line inventory and purchasing subsystems New system needs to be in place before the year 2001					
Person Requesting:					

Feasibility Report

The first purpose of this report is to describe in detail the business and computer requirements of the client. Secondly, the person or team installing the software will recommend software and hardware necessary to successfully fulfill the needs of the client.

This report includes:
- System summary-a small paragraph describing what the current system does
- Project summary-chief user name, support officer's name, scope, start date, end date, budget
- Current system summary-system description and deficiencies
- New software constraints and assumptions-performance requirements, hardware constraints, software constraints and any interfaces to other

automated systems, backup and recovery requirements, security and privacy issues

- Performance requirements and acceptance constraints-workload and volume, system growth, response times, data access and data validation new software alternatives-description of each alternative
- Improvements to the business-improvements in service, increases in income, reductions in cost
- New software impacts-hardware, software, organizational and operational
- Installation constraints-in terms of time, budget and resources, and staff conversion requirements from current to new software o cost/benefit comparisons of proposed alternative software applications
- Detailed activities schedule and budget for installation of software, testing, conversion and training.

Once the report is completed, the client reviews the findings and alternatives. The question addressed here is whether one of the proposed software applications should be installed, or another option investigated. A copy of the report should also be forwarded to the supervisor. It will be up to the client and the relevant supervisor as to whether or not you will proceed with the installation of the software.

Self-Check – 2	Test

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

_____ 1. The main participants in the installation of new software include:

    A. Clients or End-Users   C. Supervisor

    B. Computer Support Officer   D. All

_____ 2. Their main task is to provide timely advice (usually over the telephone) to users in the operation of the hardware and software in use.

    A. Supervisor   C. Network Specialist

    B. Clients or End-Users   D. Help Desk Staff

_____3. _____ are the people or group of people for whom the software is being installed. You interview them in order to find out what software they currently have, and their information needs.

    A. Clients or End-Users   C. Supervisor

    B. Computer Support Officer   D. All

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

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

Answer Sheet

Name: _____   Date: _____

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/

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

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INFORMATION TECHNOLOGY SUPPORT SERVICE

Level - I

LEARNING GUIDE – 31

Unit of Competence:	Install Software Application
Module Title:	Installing Software Application
LG Code:	ICT ITS1 L031 08
TTLM Code:	ICT ITS1 TTLM 0919

LO2: Obtain Software or Software Upgrade

Instruction Sheet	Learning Guide – 31

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

- Software that conform to the organization needs
- Licensing requirements

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 –

- Investigate application program that best conforms to requirements and organizational policies
- Obtain application program under instruction from appropriate person
- Determine licensing requirements and record in line with organizational guidelines
- Ensure target computer to conform with the minimum hardware and operating system requirements of the application program

Learning Instructions:

1. Read the specific objectives of this Learning Guide.

2. Follow the instructions described here.

3. Read the information written in the information "Sheet 1 and Sheet 2" in page -3- and -8- respectively.

4. Accomplish the "Self-check 1 and Self-check 2" in page -6- and -13- respectively

5. If you earned a satisfactory evaluation from the "Self-check 1" proceed to "Information Sheet 2 in page -8- and If you earned a satisfactory evaluation from the "Self-check 2" that is good.

Information Sheet – 1	Software that conform to the organization need

1.1. OBTAINING SOFTWARE

Once a need for software has been identified a requirement specification should be created to specify what software is required.

For example a business identifies that they need some office productivity software that will do word processing and spreadsheets. The requirements specification will detail all relevant information as to how word processing and spreadsheets need to work for the business. Once you have this information you can then start looking for software.

Once your supervisor has checked and approved the client's software requirements you will need to obtain the software.

1.1.1. Where to Look for Software

Information available on software products can be accessed from many sources. These sources have varying degrees of objectivity ranging from the authoritative to the informal. Some of common sources of information for searching a product are:

- Computer magazines
- Newspapers
- The Internet
- IT consultants
- IT department
- Computer suppliers

Other sources of information may include industry colleagues, contacts and organisations similar to your own.

Depending on the size and the type of your organization, you will choose one of several different ways of collecting the software. For example, large organizations usually have a section or a department which controls purchases and deals only with a selected number of suppliers. In such cases, you will be provided with a catalogue of available products from which to choose.

Such organizations also use a Purchase Requisition document (usually called a PR book) provided by the administrative department. You will need to fill in and submit a Purchase Order which also needs to be signed by your supervisor.

If an organization allows purchases to be made from any supplier, then you will be expected to obtain two quotations from different suppliers and attach them to your purchase order.

Smaller organizations may require some additional tasks. For example, you may be asked to create a Purchase Order form using a word processor and then submit it to a supplier. Therefore, it is essential that you know the organizational guidelines regarding the purchase of software.

Every piece of software installed in a computer has clearly specified system requirements. These requirements define an environment for correct operation of

the software. In general, features which describe such an environment may include:

- Operating system requirements (whether Windows or Macintosh or Unix or other)
- Minimum size of RAM required
- Minimum size of free disk space on a hard disk required
- Depending on the type of software, there could be a list of additional requirements such as CDROM, sound card, specified screen resolution and so forth.

Note: Before you proceed with software installation, you need to ensure that the client's computer satisfies all system requirements.

1.1.2. Verification of Technical Specifications

To help determine if the new software is suitable we will need to research the technical specifications and functionality.

1.1.2.1. Software Prerequisites

Prerequisites are conditions that will ensure the correct running of a software application.

Software prerequisites may include:
- Specific system requirements such as hardware or operating systems [but these are listed as system requirements]
- The prior installation of another software package
- Services such as security and access systems, networks, Internet connections, and so on.

Here are some examples of software prerequisites:
'To browse the World Wide Web using Netscape or other Web browsers, you must have a connection to an ISP (Internet service provider).'

1.1.2.2. System Requirements

To ensure the correct operation of their software, most software manufacturers will specify preconditions to the functioning of their software by recommending a minimum system configuration. The system requirements may include:

- The hardware platform
- The operating system
- Resource requirements (CPU, memory)
- Storage capacity for the software and data
- Hardware devices such as a mouse, CD ROM drive, printer, backup device, modem.
- Minimum specifications for hardware such as screen resolution

These system requirements ensure that software is installed and run in an appropriate environment. Many software applications can run in many

different environments, but usually software manufacturers will only guarantee their software in a limited range of environments.

1.1.2.3. System Incompatibilities

System incompatibilities are mismatches between the software and the system configuration and or other installed software. System incompatibilities may prevent the software being installed or prevent the software from operating as expected.

For example, many applications are only available for a single operating system. Some of the powerful graphic design tools can only be run on the Macintosh platform, whilst many Windows based applications that you are familiar with do not have versions that can be run on Macintosh or Linux systems.

Another example is programs that have been written for a specific computer chip. For example Windows programs are designed and built to run on Intel processors. In order to run on alternative processors like the Power PC or Alpha processors, the software needs to be ported and compiled for that machine.

During your investigation of minimum system requirements and prerequisites, it is important to recognize any incompatibilities with your target systems.

1.1.3. Contacting Vendors

The information collected on vendors and products can be extensive. To reduce the information to something manageable, it is assessed against the business requirements specification for software. This process identifies those products that are suitable to the business. The aim is to discard any products that are irrelevant and leave a smaller selection of products for further investigation. This usually results in two or three vendors and products that best meet the software requirements.

Information required from vendors will include:

- A list of prerequisites for installation and operation of the product
- A list of system requirements
- Support and maintenance services, requirements or arrangements
- Vendor details including history and client list for references
- Licensing details and options
- Product pricing and costs (including ongoing)
- Any conditions regarding evaluation of the software (installation restrictions etc)

It is also good practice to send your requirements specifications to the vendor and have them respond with how their software product addresses each requirement.

Self-Check – 1	Test

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

_____1. _____ are conditions that will ensure the correct running of a software application.

    A. Prerequisites   B. Software condition   C. Software Control D. All

_____2. To ensure the correct operation of their software, most software manufacturers will specify preconditions to the functioning of their software by recommending _____.

    A. Business Requirement   B. minimum system configuration

    C. Feasibility Requirement   D. All

_____3. _____ are mismatches between the software and the system configuration and or other installed software.

    A. Business Requirement   B. Minimum system configuration

    C. Feasibility Requirement   D. System incompatibilities

_____4. Information required from vendors will include

    A. A list of prerequisites for installation and operation of the product
    B. A list of system requirements
    C. Support and maintenance services, requirements or arrangements
    D. All

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

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

Answer Sheet

Score = _____

Rating: _____

Name: _____   Date: _____

Information Sheet – 2	Licensing requirements

2.1 Verification of Licensing Requirements

Whenever you install a piece of software on a computer you must ensure that you comply with the legal obligations outlined in its license agreement. Since a particular piece of software can be installed in many different environments and used by several users, licensing rules may also vary to accommodate each environment.

Caution: Remember - using or installing unlicensed software is illegal.

Software Licensing

- Is a legal instrument (by way of contract law) governing the usage or redistribution of software
- Allowing an individual or group to use a piece of software. Nearly all applications are licensed
- Some are based on the number machines on which the licensed program can run whereas others are based on the number of users that can use the program
- An agreement to operate software, to operate a certain number of copies and to make one backup copy

License Key

- A software license key is a pattern of numbers and/or letters provided to licensed users of a software program.
- License keys are typically created and delivered via a license generator once a software user has paid for the software and has agreed to the conditions of use and distribution as legally specified in the software license.

Software Piracy

- The illegal copying of software.
- Refers to ways of obtaining software without the permission of the software holder

Illegal copying of software is done in order to:
- Use more copies on more computers
- Make the software available on a network
- Use a copy for personal use
- Distribute copies to friends
- Sell copies to others
- Use parts of the program in another program

Copies are made legally for the following reasons:
- One backup copy to be used only if the original gets damaged
- Targets – Games & Application packages

Copyright and Intellectual Property

Copyright – the exclusive right given by law for a certain number of years to people (authors) to print, publishes, and sells copies of their original work. This original work is their *intellectual property*.

2.1.1 Types of Software License

- **Registerware:**
  Refers to computer software which requires the user to give personal information through registration in order to download or use the program.

- **Shareware/Demoware**
  Refers to copyrighted commercial software that is distributed without payment on a trial basis and is limited by any combination of functionality, availability, or convenience.

- **Freeware**
  Computer software that is available for use with no cost or for an optional fee.

  Freeware is different from shareware, where the user is obliged to pay.

- **Open Source Software (OSS)**
  OSS is also free software.

  OSS can be defined as computer software for which the human-readable source code is made available under a copyright license (or arrangement such as the public domain) that meets the Open Source Definition.

  This permits users to use, change, and improve the software, and to redistribute it in modified or unmodified form.

- **Abandonware**
  It refers to software that is no longer available for purchase or that is at least a certain amount of years old.

2.1.2 Licensing Rules for Commercial Software Applications

All commercial software comes with licensing agreements which are displayed before you install the software. Although it is a lengthy document full of legal terms and statements, you should read it carefully to know your own or your customer's rights and obligations in regard to the software.

If you install shrink-wrapped software, you will find licensing rules printed on the envelope containing the software, or on an additional page provided with the package. You should read these rules before breaking the seal of the package containing the software.

In addition, the same rules are repeated and displayed on the screen at the beginning of the installation process. You usually have to *read and accept* these rules if you wish *to complete the installation.*

If you purchased your software online and have downloaded it to a computer, its licensing agreement will be included and displayed at the beginning of the installation.

More recently, software developers have begun including the license agreement as part of the installation of the program. When you go to install the program, the license agreement appears on your screen and you are asked to accept the terms and conditions before you are allowed to proceed with the installation of the program. Because you have to click on the accept button to proceed with the installation, these types of license agreements have become known as *click-wrap licenses*.

Usually, commercial software allows installation on one computer only, unless you have a site license.

Use of Site License:
- **To make a limited number of copies for use at a single location**
- **To run the program on a LAN**

You should read the licensing rules carefully because there could be some variations. For example, a licensing rule may allow installation of the same software on three different computers. That is, one copy on a user's computer at work, one on a user's computer at home and one on a user's laptop computer. Such installation typically requires that only one copy of the software will be used at a time.

2.1.3 Licensing Rules for Organization Specific Software (In-House Developed Software)

Many large organizations develop their own software. Such software is usually not licensed to outside organizations because it was developed to match the organization's specific environment and would not operate correctly elsewhere. However, it does not mean that in-house developed software can be copied and installed freely on any computer within an organization.

Although licensing rules for such software may be less strict than rules for commercial software, the same installation procedure as for any other software must be followed.

2.2 DOCUMENTING LICENSING DETAILS

Whenever you install any type of software on a client computer you must record details of the installation according to organizational policy.

Depending on the organizational guidelines used, required details to be recorded may vary, but at least the following should be included:
- Name of the software installed
- Version number
- Information whether it is up grade or original software
- License number
- License details

- Vendor name and contact phone number
- Date of installation
- Asset/serial number of the computer on which it is installed
- Name and contact phone number of a person installing the software

Some organizations may require additional details such as location of a computer, a name of the computer user, information, whether the software is a network application and so forth. You need to check organization policy regarding documentation of software installation to complete this task correctly.

Licensing details may be recorded in a database or register on inventory designed for that purpose. Usually it is stored on a computer (or server) designated to store all information related to the organization's IT activity.

Documenting licensing details also provides the following benefits:
- It is evidence that the installation was completed correctly
- It simplifies troubleshooting and maintenance tasks
- It proves that your customer is a legal user of the software

2.3 Role of Software Installation Instructions and Manuals

A wizard - is a user friendly interactive program designed to simplify and control software installation.

Before you attempt to install any software you must carefully read the installation instructions provided with the software. Information included in the installation instructions always lists a detailed description of steps required for correct installation.

It may also contain a list of parameters you will need to supply during installation. For example, you may be asked to provide an alternative name for a folder where you wish to install the software or which currently installed programs you would like to link with the new software.

Knowing what is expected from you during installation always simplifies and speeds up the actual installation process. Installation instructions now are being replaced by installation "wizards".

A wizard is capable of checking technical features of a computer on which it is installed, and making appropriate changes without user intervention. It is also able to inform you about detected limitations of the computer system which may cause problems during the installation or operation of the software. Its interactivity is very basic. That is, it uses simple dialogue boxes where the user can make a selection, type text or just click a button.

Dialog boxes demonstrate the type of interactivity provided by installation wizards. It is not a full sequence of an installation wizard but a set of selected screens with options typically provided by an installation wizard.

Well designed software also has attached a readme file.

Readme file - contains additional information about the software. (Usually it is saved as Readme or Readme.txt).

It is recommended that you be familiar with the content of this file because it usually contains information about non standard features of the software and the latest information not available when software was developed; that is, changes implemented in the very late stage of the software development.

The software developer should also provide a user manual. A manual can be provided in printed or in electronic form. To reduce software cost and speed up software availability, many software developers offer only an electronic version. However, a printed version can be purchased for some additional cost. You can also create your own manual by printing out the content of an electronic version.

2.4 POLICIES AND OBLIGATIONS OF SOFTWARE SUPPLIERS

Help Desk Staff: Provide timely advice to users (over the phone).

All software developers provide some kind of support for users of their product. The levels of support vary; some suppliers offer free support, and others may charge some fee for their service. Also, the same software developers may offer different level of support for each product they sell.

If the software requested by your client is a commercial product, it is recommended that you check the level of provided support prior to purchasing the software.

To be entitled to any form of support you need to register the software with its developer. To do this, you can fill in the registration form provided with the software or you can do it online. Online registration is much faster and much more convenient. However, your customer must have connection to the Internet. Online registration is often a part of the installation process.

You also have to be aware that whenever you accept conditions specified in the software user's policy you also agree with the software developer's indemnity. It means that the software developer is not liable for any damages which could be caused by the software.

It also means that known problems with the software can very likely be resolved by appropriate advice from the user support section. However, if some unknown problems appear (and that can happen any time), it is best to report them to the user support team (or Help Desk Staff) and hope that they will find a solution.

Self-Check – 2	Test

Directions: Answer all the questions.

Matching

Column A

_____ 1. Registerware

_____ 2. Shareware/Demoware

_____ 3. Freeware

_____ 4. Open Source Software (OSS)

_____ 5. Abandonware

Column B

A. Computer software that is available for use with no cost or for an optional fee.

B. Computer software for which the human-readable source code is made available under a copyright license.

C. Copyrighted commercial software that is distributed without payment on a trial basis and is limited by any combination of functionality, availability, or convenience.

D. Software that is no longer available for purchase or that is at least a certain amount of years old.

E. Computer software which requires the user to give personal information through registration in order to download or use the program.

Note: Satisfactory rating - ____ points   Unsatisfactory – below__ points

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

Answer Sheet

Name: _____   Date: _____

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/

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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.

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

Note: **Satisfactory rating - ____ points   Unsatisfactory - below ____ points**

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

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

Score = _____

Rating: _____

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.
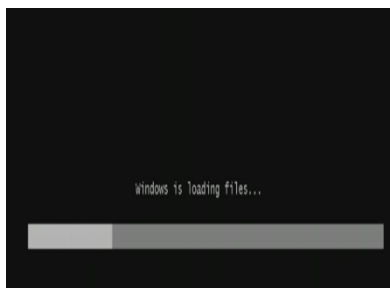
Step 2 - The next screen allows you to setup your language, time and currency format, keyboard or input method. Choose your required settings and click next to continue.

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.
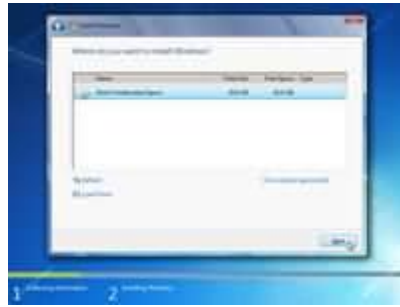
Step 7 - Windows 7 starts the installation process and starts copying all the necessary files to your hard drive as shown on the image below.

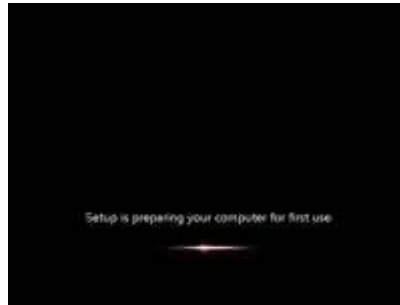**Step 8** - It will go through various stages of the setup and will reboot your system few times.
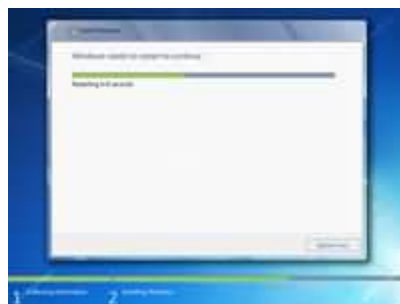
Step 9 - When your PC reboots it attempts to boot from DVD as its the first boot device. Do not press any key during the boot prompt so Windows 7 will continue with the installation by booting from the hard drive.
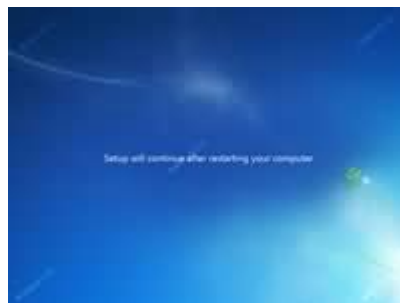
Step 10 - After the reboot your computer will be prepared for first use.

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...
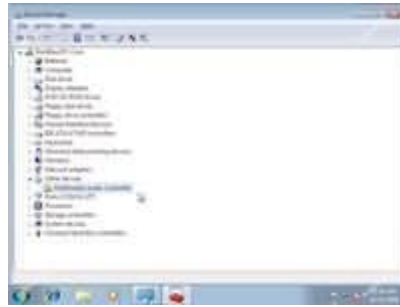
Step 22 - You can choose to "Search automatically for updated driver software" or "Browse my computer for driver software". If you have the driver CD or if the driver is on a USB drive then choose "browse my computer for driver software". Window 7 will search and install the driver from the CD or you 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.
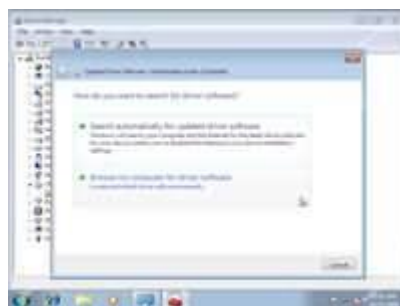
Step 23 - Finally check if you have successfully activated Windows 7. Click Start Menu -> Control Panel -> System and Security -> System. You will get a window similar to the image below. Towards the bottom you will see Windows is activated followed by your product ID. This shows that your copy of Windows 7 is fully activated.
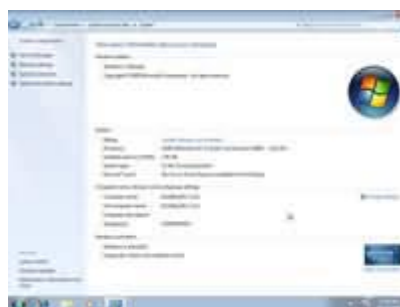
LAP Test-1	Practical Demonstration

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

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.

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3	Derese Teshome	0913938439	dereseteshome@gmail.com	AA
4	Getenesh Osamo	0923816933	gete.osamo@gmail.com	SNNPR
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INFORMATION TECHNOLOGY

SUPPORT SERVICE

Level I

Unit of Competence:	Install Software Application
Module Title:	Installing Software Application
LG Code:	ICT ITS1 L30 08
TTLM Code:	ICT ITS1 TTLM 0919

Module Title   : Installing Software Application

LO1

Information sheet1

Answer Sheet

Self Check 1

I.   Choice

1.   B
2.   C
3.   D
4.   D
5.   C
6.   B

Information sheet2

Self Check 2

II.   Choice

1. D

2. D

3. A

LO2

Information sheet.1

Answer Sheet

Self Check 1

I.   Choice

1.   A
2.   B
3.   D
4.   D

Information sheet.2

Answer Sheet

Self Check 2

I.   Matching

1. E
2. C
3. A
4. B
5. D

LO3

Information sheet.1

Answer Sheet1

Self Check 1

Choice

1. D

2. C

3. B

4. D

5. A

6. D

Information sheet.2

Answer Sheet2

Self Check 2

Choice

1. A

True or False

1. F

2. T

3. T

Unit of Competence:	Receive and Responded workplace environment
Module Title:	Receive and Responded workplace environment
LG Code:	ICT ITS1 M09 L01 03
TTLM Code:	ICT ITS1 TTLM09 0919

LO1

Information shee.1

Answer Sheet

Self Check 1

      I.   Choice

1. B
2. D
3. D
4. D

Information shee.2

Answer Sheet

Self Check 2

Choice

1. A

2. B

3. D

4. B

LO2

Information shee.1

Answer Sheet

Self Check 1

Choice

1. D

2. A