

Web Development and Database Administration Level-II

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Acronym

SOP Standard Operating Procedure

TTLM Teaching, Training and Learning Materials

APP Application

MSL Ministry of Labor and Skills and Ministry of Health

FAQs Frequently Asked Questions

Acknowledgment

Ministry of Labor and Skills and Ministry of Health wish to extend thanks and appreciation to the many representatives of TVET instructors and respective industry experts who donated their time and expertise to the development of this Teaching, Training and Learning Materials (TTLM).

Introduction to the Module

Documenting change is a vitally important activity for learning from and improving upon the work carried out in development initiatives. While collecting information and analyzing key activities and outcomes of a project do provide initial insights, documenting how a change process can provide strong (and new) insights for practice and learning. This is achieved in highlighting factors that lead to an initiative's outcomes.

This module is designed to meet the industry requirement under the Web Development and Database Administration occupational standard, particularly for the unit of competency: Updating and Documenting Operational Procedures.

This module covers the units:

- Technical and user documentation
- Update procedures
- Update documentation

Learning Objective of the Module

- Assess technical and user documentation
- Update procedures
- Update documentation

Module Instruction

For effective use this modules trainees are expected to follow the following module instruction:

1. Read the information written in each unit
2. Accomplish the Self-checks at the end of each unit
3. Perform Operation Sheets which were provided at the end of units
4. Do the “LAP test” giver at the end of each unit and
5. Read the identified reference book for Examples and exercise

Unit one: Assess technical and user documentation

This unit is developed to provide you the necessary information regarding the following content coverage and topics:

- Methods to review the version of current documentation.
- Compare technical and user documentation with current system
- Accuracy of documentation for future reference.

This unit will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Review the version of documentation
- Accuracy of technical and user documentation
- Identify inaccuracy in documentation

1.1 Reviewing current version of technical and user documentation

1.1.1 Definition of Documentation

Documentation may refer to the process of providing evidence ("to document something") or to the communicable material used to provide such documentation (i.e. a document).

For a software company, documentation refers to information either embedded in to the product or published in the documentation. It mainly describes what the application does, how it works, and other essential details.

1.1.2 Purpose of Documentation

Documentation simplifies complicated ideas into clear and easy-to-understand and guides even for non-experts too.

What is the documentation going to be used for? This is the first question to ask before starting to create any documentation. When you are satisfied that you have an answer, you can then decide what type of documentation you are going to produce.

1.1.3 Types of Documentation

Documentation can be two types of documentation are User documentation and Technical documentation.

A. User documentation:

User documentation is the content that you provide the end user in order for them to be more successful with your product or service. Also known as user guides, instruction manuals, or user manuals, user documentation is there to hold your customer's hand as they learn about your product.

User documentation can be delivered to customers through a variety of different mediums. It could be an online knowledge base, printed manual or video tutorials. It's up to you to decide what best suits your customers and offer the format that is most useful to them.

Providing helpful user documentation could make or break the customer experience. It helps customers get the most out of your product or service and offers a viable alternative to contacting the customer support team.

User documentation (also called end user manuals, end user guides, instruction manuals, etc.) is the content you provide end users with to help them be more successful with your product or service. User documentation is created for end-users on using a product.

The main goal of user documentation is to assist the end-users by providing them with clear and comprehensible info about the particular product or service. User documentation comprises:

- Support Portals
- FAQs
- Video tutorials
- Step-by-step guides
- Embedded assistance
- Reference materials
- Training materials
- Instructional materials
- **Tech writers describe the following aspects in user documentation:**
 - Software requirements.
 - Installation guide.
 - How to start the system.
 - How to use features of a product.
 - Screenshots explaining those features.
 - Contacts of the developer if an undocumented question arises and more.

B. Technical documentation:

Technical documentation is any piece of writing that describes the application, purpose, creation or architecture of a product or service. Its goal is to explain something that an organization offers. There are several types of technical documents, each intended for a certain audience. Writing technical documents is usually the responsibility of technical writers, project managers, and members of a development team or experts on the product or service in question. Take a software product as an example the technical documentation should include the following:

- **Requirements Documentation** – sheds light on what is required from the product, including the basic and advanced features, functionality, resources, and goals, among other things. This is meant for the software development teams and testers.
- **Architecture/Design Documentation** – these sketch out the overall design of the software product and describe the design principles for the development teams.
- **Process Documentation** – these break down the product journey in properly structured formats for the product team.
- **Market Strategy** – this is created by the product marketing team to provide a north-star and a game plan to bring a new product to the market.

Effectively written documents help the intended audience by educating them on details that are necessary, such as for the operation of a product or the understanding of a topic. It is also a

documentation that is produced for a person who has enough expertise in a particular computer system to support or maintain that system. Examples of technical documentation are:

- User instructions
- Operating instructions
- Servicing instructions
- Installation manuals
- Software manuals

1.1.4 Why Documentation Review important?

- Overall improvement
- Accurate and up-to-date documents
- Increases credibility

1.1.5 The Need for Documentation Review

- Technically correct document
- Concise Information
- Avoid Chaos/disorder
- Timely Delivery
- Satisfaction

Review Objectives

- **Evaluate the documented information in terms of:**
 - Accuracy = Correctness
 - Completeness = wholeness
 - Conciseness = shortness
- Reduce the defect percentage
- Improve the quality of documents
- Focus on correcting the defects

1.1.7 Types of documentation reviews

- Peer Review
 - Review by people who have coordinated knowledge and skills.
 - Provide a list of exactly what you need them to review
 - Assess peer review practice
 - Prepare procedure documents

- Formulate a program agenda
- Presentation Review
- Review amongst the technical writers
- Subject matter expert review
- Review for technical information
- Overall Review
- Review by the testing team for detecting defects.

1.1.8 Documentation Review Process

- Plan the review process
- Develop a clear, focused charge for each reviewer to identify important issues and invite suggestions for improvement.
- Prepare and maintain a review record.
- Make recommended changes to document and respond to the reviewer's comments.

1.1.9 Focus area for Document Review

- **Before circulation:**
 - Review the document for readability and clarity.
 - Review for correct English usage
 - Review and evaluate the technical content
 - Make a reviewers checklist
 - Focus on the technical review and not on editorial review
 - Verify the technical accuracy of all procedural steps.
 - Verify the accuracy of all screen captures in the document.
- **After review:**
 - Review the sent checklist
 - Take a positive approach
 - Maintain a tracking list
 - Decide and let the reviewer know which comments would be incorporated
 - Call a meeting if required.
 - Publish the final copy.

1.1.10 Challenges of Document Review

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- Involving Team (Let us do it)
- Getting Proper reviews
- Handling Last Minute Changes

1.2 Comparing user documentation accuracy with current system ??

Make sure the facts as stated in the document are correct, helpful, and on topic. To do a technical accuracy review, you really need to know your subject matter, probably as well or better than the original author. Use whatever other documentation is available for your subject, including program documentation, other printed books, etc. You might also use mailing lists on the topic, asking for third parties to verify certain facts of which you are in doubt.

When doing this type of review, consider if the information is only valid for certain types of hardware or software. If this is the case, make sure to note the limitations of the document within the document, either within the abstract or as a note at the beginning of the document. For example, if the solutions in the document only are relevant for one type or brand of hardware, make sure that that limitation is defined. This will keep readers from trying to apply a certain type of technology to an application or situation where it will not work.

The same should apply for the prerequisite knowledge of the reader. If prior knowledge of a subject is assumed or required, the author should say so somewhere at the beginning of the document, and it's helpful to ask that authors provide a Resource section for further reading, to bring readers that much closer to the required information.

1.2.1 Language Review

Because writers come from all types of backgrounds, there may be problems within the documentation that need to be fixed. Writers may be very knowledgeable in their subject areas but not great writers, or they may be excellent writers but not completely fluent in the language of the document. The language review addresses these types of problems by focusing on language issues that make the document easier for the user to read and understand. Some of the problems that may occur within the document are poor sentence structure, grammar, organization, clarity, and spelling.

If you are doing a language review, you should be fluent in the language and the structure of the language. You want to consider both the logic and grammar of the document. Your primary goal in a language review is to identify and correct areas that could lead to confusion for the reader/user of the document. To this end, you can most certainly use language and grammar references such as dictionaries and handbooks when in doubt.

Although this review does address the structure and delivery of the language, you should not attempt to purge the document of individuality and personality in an attempt to make it "sound better" or more technical. Stilted or overformal, humorless language and structures are not the goals here. Again, your goal should be to make the document clear, unambiguous, and correct in spelling and grammar.

1.2.2 Items to evaluate:

- **Spelling:** Spelling should conform to a standardized English spelling of terms. For words that are new to the language and not yet standardized (for example technical Linux terminology that is generally accepted in the community), follow the most common spelling for the term.
- **Grammar:** For the purposes of this review, grammar should address issues such as standards of subject/verb agreement, pronoun/antecedent agreement, etc

For example, to say, "You will need to set several parameters in the config file to make it compile correctly. The ones you choose to set make a big difference."

- **Use of capital letters:** The document's title and section headings may follow one of two conventions, but must be consistent throughout. Titles may either capitalize only the first word, or may capitalize each word.
- **Clarity:** Judgments on clarity are sometimes difficult to make. One successful strategy in evaluating clarity is asking the question "If I did not already know this information, would the explanation be clear from this document." If it is confusing to you and you already generally understand what the author is trying to say, then there is a good chance that the explanation is really confusing for someone reading the document for the first time. If you run across this situation, and you don't really know

how to correct the technical explanation, or you are afraid your changes might affect the meaning of the document, ask for help from a technical expert. If no technical expert is available or no one responds to your requests, note the needed changes in the review and mark that these concerns need to be addressed in the technical review.

- **Organization:** In some cases the document would really benefit from a different structure. You should address these issues when they interfere with the understanding of the information within the document. If a document gives background information after a procedure has been performed, this may well be too late for the reader to fully consider the information he or she needs before performing the task. Look for document organization that might confuse or mislead the reader. These will be the types of issues you want to address. Once these are identified, it may be worthwhile to let the author know your rationale and discuss major changes with him or her.
- **Sentence Structure:** To some extent, sentence structure issues are discussed in the grammar section; however, there are some additional issues that are not grammatically incorrect but do interfere with the readers comprehension of the material. One of the most noticeable of these is stacked prepositional phrases.

Stacked prepositional phrases become a problem when the document's readability suffers because it becomes less and less clear what the subject and action of the sentence are. In some cases more precise descriptors are needed or sentences need to be changed from one long sentence that is hard to comprehend, to two or three more easily read sentences.

- **Readability:** This area is somewhat subjective. What passes for fairly readable material to one person might be confusing to someone else. Because this is a value judgment you should be cautious when marking up an author's work for readability. Realize when basing a judgment on readability that you might be dealing with preferences of style. In evaluating readability you must consider whether or not the way the document is written truly interferes with the readers understanding of the information. If the answer you come up with is "No, but it doesn't sound like I think it should." then you should probably not re-write the text to make it sound better to you.

- **Title:** The title should be in proper title case. The general principle for this is that all words are capitalized in a title except prepositions and articles (an article will be capitalized if it is the first word in the title).
- **Date Formats:** Dates should be in standard ISO format, which is YYYY-MM-DD.
- **Definitions of Acronyms or Slang:** Terminology and language within the realm of computer technology changes rapidly. In reviewing documents you may find that many of the terms that are being discussed are not valid words in any dictionary or technical reference that you are familiar with. Terms that are less familiar should be defined immediately following the first instance of the term. Slang should be replaced with more common terminology if the slang will causes the reader to be confused by the connotation or denotation of the term.

Remember that readers using the document may not come to English as a primary language and, therefore, you should do your best to make sure that the document is as easy to understand as possible.

- **Latin abbreviations.** Avoid using abbreviations. e.g. (for example), et al. (and others), etc (and so on) and i.e. (that is) should always use the English equivalent.
- **Required Markup**

DocBookXML version

PDF

CHM (Compiled HTML Help): The CHM file type is primarily associated with 'HTML Help' by Microsoft Corporation.

1.2.3 Required Metadata

The following elements are all required:

Title: Every document must contain a short, descriptive title. It should be reasonably unique; check other documents in the collection to make sure your document's title is distinctive from all other documents.

Abstract: A short description of your document must be included in the abstract. This description is typically one or two sentences in length.

Author: Every document must have an author. If there are multiple authors, you may use author group. If the document was prepared by an organization with no individual author, please use author group instead.

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Editor: Every new document must go through the review process and have a technical, language and metadata/markup review editor listed update. The date of publication for the document. The date should be in the ISO standard of YYYY-MM-DD.

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1.3 Identifying and documenting inaccuracies

Unless a clear, consistent, and enforceable system for documentation is established and disseminated throughout your workforce, it's likely everyone will have different ideas about what constitutes “accurate” and “appropriate” IT documentation. Even with strong standard operating procedures that require technicians to keep detailed logs and notes, you're likely to find every individual's documentation strategy will be slightly different.

1.3.1 Rules for accurate documentation and access management

1. Standardize before practice

Creating clear guidelines to illustrate what consistent documentation practices look like is key in facilitating accurate documentation. By establishing and enforcing a standard, you can help ensure your entire staff adheres to your documentation practices.

2. Know what to Document

You should build proper documentation across all areas of your support field—for technical administrators and customers. Here are a few examples of what you should document:

- Managed assets, systems, and devices,
- Services and applications,
- The vendors that manufacture and support the services

1.4 Identifying sources and types of information

The sources from where we get information are called information sources and these comprise documents, humans, institutions as well as mass media like newspaper, radio and television. All of us have seen and used many of these sources. In this Unit we shall study these information sources, categorise them based on their type, information contents and physical form. We shall also study the historical development of these sources.

1.4.1 Types of Information Source

Information sources are also organised according to their contents, type, media or form to cater to the different needs of the users. We can group information sources into two broad categories as follows:

A. Documentary Sources

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B. Non-documentary Sources

A. **Documentary Sources:** All recorded sources of information irrespective of their contents and forms come under documentary sources. These may be published or unpublished, in print or in electronic form. These may be books, periodicals, magazines, and others. Documentary sources can further be categorised based on their contents and form (or media).

By Contents Based on the information contents and organisational level these sources can be grouped into:

i) Primary,

Primary sources are firsthand documents that provide direct evidence on your topic.

A primary source is most often created during the time the events you are studying occurred, such as newspaper articles from the period, correspondence, diplomatic records, original research reports and notes, diaries etc. They may also include items created after the events occurred, but that recount them such as autobiographies and oral histories.

ii) Secondary

Secondary Sources are accounts written after the fact with the benefit of hindsight. They are interpretations and evaluations of primary sources. Secondary sources are not evidence, but rather commentary on and discussion of evidence.

iii. Tertiary sources of information.

A tertiary source presents summaries or condensed versions of materials, usually with references back to the primary and/or secondary sources.

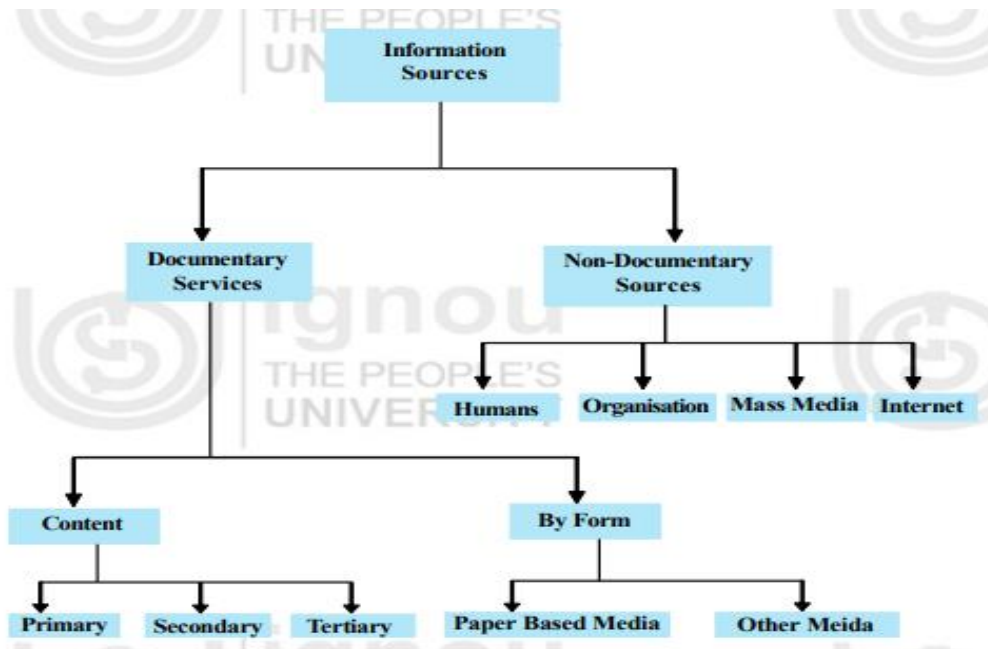


Figure 1: Classification of Information source

- By Form Based on the physical form the documentary sources can be grouped into:
 - ii) Paper-based documentary sources- document in paper based form.
 - iii) Documentary sources on other media which cover the following:
 1. **Sound or audio recording:** Audio cassettes, audio tapes, etc.
 2. **Visual Images:** Still: slides, filmstrips, transparencies, photographs.
 3. **Visual Images:** Moving: Films, videotapes, video discs; etc.
 4. **Artifacts and Realia:** Globes, relief models, etc.
 5. **Electronic Media:** Magnetic tapes, discs, drums, etc.
 6. **Optical Media:** CD-ROM, DVD, etc.
 7. **Microforms:** Microfilms, microfiche, etc.

Self Check 1

Part I : Mark the following statements as True or False. / 1pts/

1. Dissertations and theses are secondary sources of information.
2. Primary sources of information are first in the order of appearance.
3. Trade and product bulletins are published by government bodies.
4. Primary sources are widely scattered.

Part II: Match Column A with Column B / 2 pts/

- | <u>A</u> | <u>B</u> |
|-----------------------------------|--------------------------------------|
| 1. Textbooks and annual reports | A. Tertiary source of information |
| 2. Encyclopedia Britannica | B. An index type of secondary source |
| 3. Indian Science Abstracts | C. A reference source |
| 4. Bibliography of bibliographies | D. Survey type of publication |

Part III. Give Short Answer.

1. Define the Documentation. / 3pts/
2. List the advantage of preparing Technical Documentation? /3 pts/
3. . Why Documentation review is important? /4pts/

Unit Two: Update procedures

This unit is developed to provide you the necessary information regarding the following content coverage and topics:

- operational procedure
- Develop / update operational procedures
- Submit the propose operating procedures to appropriate person.

This unit will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Operational procedure requirements are determined using review outcomes.
- Operating procedures are developed / updated for the system.
- Proposed operating procedures are submitted to appropriate person.

2.1 Determining operational procedure of tools and equipment

An Operating Procedure (OP) is a set of written instructions that document a routine on repetitive activity followed by an organization. The development and use of Ops are an integral part of a successful quality system as it provides individuals with the information to perform a job properly, and facilitates consistency in the quality and integrity of a product or end-result.

STANDARD OPERATING PROCEDURE

Insert Department

SOP No: Insert number

SOP Title: Insert title

I

⊕ SOP Number **Insert Number**
SOP Title **Insert Title**

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

Effective Date:	
Review Date:	

⊕

READ BY			
NAME	TITLE	SIGNATURE	DATE

Fig 1: Template for SOP

2.2 Developing operating procedure

1. Use SOP Templates

The number of new SOPs you need will depend on your organization's size, industry, and scope of operations. User-friendly templates provides an excellent starting point SOP template is a document used to layout, organize, and describe specific tasks.

2. Plan to Reduce Waste When Developing Standard Operating Procedures

Waste	How SOPs Minimize Waste
Under-utilization of Skills	Address poor employee on boarding processes, poor communication, and wasteful administrative duties.
Defects	Identify common causes of troubleshooting and consult employees on how to fill process gaps.
Overproduction	Address sources of overproduction, such as inaccurate market forecasts, unclear customer demands, poorly applied automation, and engineering changes.
Waiting Time	Note routine delays, such as unbalanced workloads, frequent unplanned downtimes, and employee absenteeism.
Motion Waste	Consider rearranging layouts and workflows to decrease distance and eliminate unnecessary processes.
Inventory Excess	Remedy unreliable suppliers, misunderstood customer needs, long set-up times, and mismatched production speeds.
Transportation Waste	Simplify processes, reduce on-premise trips, and minimize the handling of secondary products.

3. Gather Employee Input

Involving team members in decision-making processes often leads to better business outcomes. Ask your employees how the routine tasks they are responsible for handling should be performed.

After speaking with the individuals directly involved, you may be surprised to learn certain tasks involve more or fewer steps than you had anticipated. Such instances could go one of two ways: the employees could have developed more efficient ways to execute procedures on their own or missing essential steps necessary for quality control, cost control, and stakeholder safety. Once your initial SOP draft is completed, consult the same team members to identify any missing or complicated steps.

5. Write SOPs from the End User’s Perspective

But knowing the desired end result isn’t enough. You also must write SOPs clearly so that they leave no room for confusion, ambiguity, or employee errors.

6. Create SOPs for Reviewing SOPs

Management SOPS are essential for maintaining consistency across organizational lines. For best results, management should consistently revisit SOPs to validate their accuracy within existing workspace environments, quality control standards, and regulatory requirements.

7. Experiment with SOP Formats and Review.

When developing standard operating procedures, managers typically follow one of three different types of formats, including:

- **Simple Steps Format:** This format is suitable for short, routine, and easy-to-follow procedures. It’s usually a simple, bulleted list with short sentences. The format is mostly used for safety guidelines and mandatory documentation.
- **Hierarchical Steps Format:** For SOPs that involve a lot of steps, consider a hierarchical steps format. This layout lists a task’s main steps as primary checkboxes, followed by their related sub steps as secondary checkboxes.
- **Flowchart Format:** Managers use process flowcharts for SOPs that involve several possible outcomes and decisions along the way. The chart maps out and plans potential procedures to follow in the event of unpredictable situations.

This page can include:

- The title of the procedure
- An SOP identification number
- A publication date or revision date
- The name of the role, organization, division, or agency that the SOP applies to
Names and signatures of those who prepared and approved the procedures outlined in the SOP

For example, you can use the simple steps format to outline how to clean lab equipment.

- **Benefits of SOP Digitization:**

- Enhanced decision-making by accessing insightful information such as job performance, time-on-task, and other important metrics
- Streamlined audits and inspections
- Secure cloud-based data storage
- Increased efficiency in implementation
- Improved quality-control processes
- Optimization of employee talent and skills
- Saved time

2.3 Submitting proposed operating procedure to an appropriate person

After you have written your standard operating procedure document:

1. Send a draft of the SOP to team members for review. Have them note grammatical and technical errors.
2. Test the document yourself to ensure that you achieve the desired outcome.
3. Have other team members test the procedures to ensure that the language is clear, can be easily followed, and can be completed successfully.
4. Incorporate relevant edits and suggestions to improve the document.
5. Repeat these steps until the document is approved and accepted by all stakeholders.
6. Implement the SOP. Make it easily accessible to those who need it to do their jobs.
7. You should review the SOP every six to twelve months or as necessary to identify areas where it can be improved and to reflect any changes that have been made to current procedures.

2.3.1 Types and purpose of user documentation

Users might need to consult a range of documentation in order to install, configure and/or use the functions of a system or application. There are many different types of user documentation depending on what users require. For example, a new staff member using a particular IT system for the first time needs to refer to a user guide and tutorials and online help. In other words, they firstly need documentation that helps them learn to use the software. As they become more familiar with the system, they will need access to other types of documentation such as FAQs (Frequently Asked Questions). **Example:**

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Documentation type	Description
Project specifications	specifies the detailed business requirements of the project including how the system will work and the underlying functionality
Reports	produced by the system, program, network or application
Help resources	provides online Help, quick reference cards, scenarios, FAQs (Frequently Asked Questions). Users can search for help on using of a specific system, program, network or application
User manual/guide	describes how the user will use a system, program, network or application to do their job
Training materials	train staff in how to use a system, program, network or application to do their job
Self-paced tutorials	teach staff how to use a system, program, network or application to do their job. These may be online or paper-based tutorials.
Brochures	outline what a computer application does

Here is an Example for what was the main purpose of the documentation? What did it enable you to do? These are some examples of user documentation and their purpose.

Examples	Purpose
A project specification, training manual, user guide, tutorials or help that provides step by step guidance in how to use the software.	to learn how to use a piece of software
A training manual, quick reference guide or user guide that provides detailed commands and specifications of a software package to assist with troubleshooting problems.	to refer to a specific feature of a piece of software

Once you have decided what the purpose of your documentation is and what type of documentation you are going to produce, you can look at the needs of the potential users of the documentation.

- **Users' needs:**

A **needs analysis** is a process where the needs of the target groups for the documentation are identified and analysed. This analysis helps to make decisions on what the documentation should contain and what format is most suitable. For example, Data Entry staff in a call centre need to know how to correctly enter data in a database so that orders can be generated correctly from a database.

For training materials and online help a needs analysis should be conducted in person with the staff who will need the documentation. For other documentation a look at the needs of the users without speaking directly to staff is sufficient.

After considering user characteristics and needs, possible solutions can be found, for example:

User characteristic	User need	Possible solutions
level of computing experience	beginner to expert	create different sections for different levels of experience
experience with the particular system or application	beginner to expert	create different sections for different levels of experience
frequency of use with a particular system or application	constant, frequent to weekly, monthly, annually	there must be initial training with some sort of follow-up support
workplace tasks	simple, repetitive tasks to complex tasks	documentation must clearly relate to the tasks at hand
work practices and environment	Eg: Part-time, shift work, office, warehouse	occupational health and safety documentation is essential
language skills	difficulty reading and understanding written language to very competent readers	<ul style="list-style-type: none"> • keep language simple, use plain English • explain technical terms and jargon if they must be used • avoid long uncommon words if simple words will do

User characteristic	User need	Possible solutions
cultural background	language appropriate to some users may not be appropriate for others	<ul style="list-style-type: none"> • use language appropriate for all users • American spelling often appears in documentation, since it is often where the software originates
personal characteristics such as aptitude, educational background, age, disability	users will learn at varying pace	make sure individual needs are catered for to organisational policies
level of confidence	users might be fearful and not confident with computers	<ul style="list-style-type: none"> • be positive and encouraging in your approach • avoid reinforcing negative attitudes

It's almost impossible to cater for all these variations. However in preparing documentation for a new user, you would obviously not confuse them with technical jargon on the first page! You need to find a balance and remember that any documentation must be consistent with the organisation's policy, conventions and standards.

For any form of documentation to be useful it must be designed with the needs of its potential users in mind. An analysis of the requirements of the users, and the way their needs can be effectively addressed, is a critical step in the process of determining documentation requirements.

- **What to include in user documentation:**

It's a good idea at this stage to think about the content that you will include in the user documentation. This is so you can estimate the number of pages, the complexity of the content and what the graphic and text components will be.

The content will have some influence on:

- design of the documentation, including layout, use of text and graphics
- medium, e.g. paper-based or online
- the time and resources needed to develop the documentation.

- **Media for user documentation**

You can consider paper-based documentation, online documentation or a combination of both.

The media type you choose will be influenced by the:

1. Purpose of the documentation
2. User needs and characteristics
3. Content (subject matter).

Always keep in mind that you need to include a range of items that allow users to access the required information quickly and easily. There are advantages and disadvantages to online and paper media.

Media	Advantages	Disadvantages
Paper	<ul style="list-style-type: none"> • conventional, most people are used to paper products • easy and fast to prepare • inexpensive to produce • requires readily available software 	<ul style="list-style-type: none"> • hard to maintain control of different versions • costly to update

Online	<ul style="list-style-type: none"> • convenient • easy to reach many people geographically dispersed • can be colourful and fun • can link to other related documents • easy to maintain version control • not costly to update 	<ul style="list-style-type: none"> • can be expensive • requires specialised software
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- **Designing templates**

Once you have determined the documentation requirements, you can develop a template that meets those requirements and makes the job easier. A template is a file that contains a standard layout, styles and fonts that are used in the production of the documentation.

When you want to create a file for user documentation, you open the standard template, usually in Word, and the layout, fonts and styles are already set up in the document. All you need to do is start writing. Everyone uses the same template, so there is a consistent look and feel to all of the user documentation.

The template may be:

- a Word template
- an HTML template
- an online help template.

The medium will determine what kind of template you use.

- **Features of templates:**

A. Paper-based documentation

Features that may be included in paper-based documentation are:

- table of contents
- columns and tables

- page and section numbering
- headers and footers
- graphics and text surrounds
- Substantially chunked information.

B. Online documentation

- **Features that may be included in online documentation are:**

- table of contents hyperlinks
- tables
- links to other pages/sites
- navigation icons
- usability/functionality
- heavy use of graphics.

- **Obtaining sign-off on templates**

Like all documentation, templates also need to be signed-off by the relevant people. The sign off process will be outlined in the organisational documentation policy.

The content of the template will depend on the purpose of the documentation. A template for training materials will look quite different to a template for a procedural manual.

The template should be designed in consultation with users or a subject expert. Once the template has been designed, it should be distributed according to the user documentation policy, or, the agreed review process if you are working towards final sign-off.

Self Check 2

Part I: Say True if statement is correct say False if statement is Incorrect. / 1 pts/

1. An Operating Procedure (OP) is an instructional document.
2. The template can be designed in consultation with users only.
3. A needs analysis is a process where the needs of the target groups to be documented.
4. Review the SOP every six to twelve months may not be must.
5. The content of the template will depend on the purpose work flow.

Part II: Give Short Answer.

1. List the three types of standard operating procedure format. / 2 pts/

2. What are the content to be consider when we prepare Technical Documentation?/ Mention at list at least 4 points/ /5 pts/

3. The media type you choose will be influenced by the documentation process. What are they? / 3pts/

Operation Sheet 2:1 Prepare Standard operating procedure (SOP)

Operation title: Preparing standard operating procedure

Purpose: To prepare standard operating procedure

Instruction: Use the given information below to prepare Standard operating procedure (SOP).

- **Tools and requirement:**

1. Computers
2. Paper
3. Software
4. Printer

- **Steps in doing the task**

1. Open Microsoft Office Word 2010, then
2. Design the table as shown below enters the information as shown below.

Manufacturing Standard Operating Procedure			
Company Name			
Street Address			
City, Street, Zip Code			
Version 000			
00/00/00			
Department Responsible	Version History		
	Version No		Current Version Date
	Writer		Effective Date
	Approved By		Expiration Date
	QA Manager		Signature
Review Procedure: Use the previous procedure gap and point out the New procedure.	1.----- 2.----- 3.-----		

Table 1: Sample Lap Top specification

- **Quality Criteria:**
 - The Document should be list out newly changed procedures.
 - It should support to additional features of good customer support.
- **Precautions:**
 - Cross Check old SOP.

Lap Test 2

Instruction: Based on the above Operation sheet 2.1, do the following.

1. Prepare SOP for cleaning ICT lap shop.

Unit Three: Update documentation

This unit to provide you the necessary information regarding the following content coverage and topics:

- Feedback Review and making appropriate changes
- Update Technical and user documentation
- Submit technical and user documentation for final approval
- Distribute technical and user documentation

This guide will also assist you to attain the learning outcomes stated in the cover page.

Specifically, upon completion of this learning guide, you will be able to:

- Feedback and review appropriate changes
- Incorporate changes to Technical and user documentation as to updated
- Submit Technical and user documentation to appropriate person for final approval.
- Distribute Technical and user documentation agreed with appropriate person.

3.1 Reviewing feed back

Documentation consists of the organization’s business documents used to support security and accounting events. The strength of documentation is that it is prevalent and available at a low cost. Documents can be internal or externally generated.

3.1.1 Documentation review criteria include three areas of focus:

1. Review is used for the “generalized” level of rigor, that is, a high-level examination looking for required content and for any obvious errors, omissions, or inconsistencies.
2. Study is used for the “focused” level of rigor, that is, an examination that includes the intent of “review” and adds a more in-depth examination for greater evidence to support a determination of whether the document has the required content and is free of errors, omissions, and inconsistencies.
3. Analyze is used for the “detailed” level of rigor, that is, an examination that includes the intent of both “review” and “study,” adding a thorough and detailed analysis for significant grounds for confidence in the determination of whether required content is present and the document is correct, complete, and consistent.

3.2 Updating technical and user documentation

3.2.1 Determining your needs

Before any venture into selecting any new equipment or services, it is important to have a clear understanding of your needs. If you don’t fully understand your needs then it is not possible to ensure those needs are correctly met. In other words, know exactly what you want before you try to get it.

3.2.2 Undertake a requirements analysis

While we will not be examining all the finer details of performing a proper requirements analysis, it is worthwhile covering some of the basics.

Firstly, it is vitally important to put your goals into clear and concise terms. This might be in terms of a problem definition, or business plan for expansion, or upgrading your capabilities. Your definition should not include any details of specific solutions as far as equipment, suppliers etc.

You should also include a set of criteria such as time and cost limitations, types and levels of support, etc. If you document all these requirements, when you finally make your decision and implement it, you will be able to determine if it constitutes a successful project or not.

After considering your overall goals and criteria, you can then put into simple and uncomplicated terms what would be a solution to the problem or requirement.

3.2.3 Evaluate your alternatives

Collect all the information you can about the types of equipment available, the suppliers of that equipment, the training required to use the equipment or associated programs.

You need to have an open mind about the alternatives. Do not think that there is only one right choice, as there are always viable options. For example, you may not need to purchase all new equipment when a few upgrade options may be both acceptable and economical. There is always more than one option!

Once you have a comprehensive list of what is available, compare that list with any organisational guidelines and policies that are in place. Many large organisations and government departments have set criteria for purchasing equipment. It's necessary to familiarise yourself with those guidelines before making any recommendations or purchases. There may be organisation guidelines on the minimum standards required for equipment. Those standards might relate to:

- international or industry standards
- supplier restrictions, approved suppliers or other requirements
- purchasing guidelines (there may be different guidelines depending on the amount of money to be spent)
- minimum warranties and/or guarantees
- support levels required
- how often equipment should be automatically reviewed or updated etc.

3.2.4 Making recommendations

After reviewing all the information above, you would then make recommendations, or make the purchases.

The important point to note is that if you do not have clearly in mind the equipment and services that you need, it is unlikely that you will make the best choices. In addition you may make the best choices in equipment, etc but there may be organisational reasons why your selection will not be approved.

3.3 Submitting technical and user documentation

3.3.1 There are 6 Steps to Document Review and Approval Process

Step #1: Define Your Document Review and Approval Needs

Step #2: Choose the Right Document Review and Approval Tool

Step #3: Upload Documents

Step #4: Share Comments and Feedback

Step #5: Share Documents with Team Members, Clients, and Reviewers

Step #6: Resolve Comments, Finalize, and Approve Documents

3.4 Distributing technical and user documentation

3.4.1 Document control and distribution

In an IT organization or department, the controlled distribution of documentation is of paramount importance.

3.4.2 Levels of security and confidentiality

The inventory record of any document should show the security level.

High security — valuable originals, etc

Some documents in the care of IT must be kept safe, perhaps in their original condition. They may hold trade secrets or confidential information. Some documents are held in a form that is liable to damage and must be kept in a secure area, not to be removed, with even authorised people only able to access copies or images of them.

High security — critical information and fragile media

Original documents that may have a critical value, or be recorded on a fragile medium such as tape, should not be allowed to leave their secure storage place. Only copies should be taken out.

Medium security — sensitive and restricted material

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Some records contain sensitive material, and may not be seen by all employees. Each document and each authorised user of a system should be assigned a security level. Unauthorised people can be denied access to the whole system. If a person’s security level were lower than the security level of a document or record, access would be denied.

Low security — general access required

Other documents might hold knowledge that is critical to the workings of IT equipment, but copies or images can be freely distributed, so long as the version of the document is clearly marked, and the reader has the necessary authority.

3.4.3 Hard copy documents

If a document is in hard copy, and the user is authorized to access it, the lender’s details can be recorded in a simple database to keep track of it

Sample loan database

Item	Restrictions	On loan by	Phone	Date	Return date

Soft copy documents

Distribution can be made secure and tracked by granting access to only the appropriate documents (by pre-determined levels of security) and by sending documents by email and filing/registering a copy of the email.

If the customer is off site, the email attachment must be in a compatible format. In the case of intranet html documents, usage can be tracked by the number of times that the page has been accessed, and privileges can be allocated of access needs to be restricted.

Reporting, auditing and archiving documentation

Your manager could ask you for a report on who has been using the technical documents listed in the index or inventory. You may need to show what’s been added, what’s been deleted, or transferred.

You may be asked to extract from your index or inventory a summary of who has borrowed books, or taken, or even read various documents.

Technical records need regular auditing. You may be called on at intervals to check records and manuals. If so, you would look for items missing, damaged, misplaced, borrowed for too long, or materials that are out of date.

Some documents have to be kept, by law, for a certain amount of time and should be archived. Records or books that have not had any activity for a while can be transferred to archives, freeing up valuable space.

Self Check 3

Part I: Give Short Answer.

1. Define Hard copy documents?
2. Write List Levels of security?
3. Why document review is important by having feed back?

Reference

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2. web1.keira-h.schools.nsw.edu.au/faculties/IT

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