

HARD WARE SND NETWORK SERVICING LEVEL

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Occupational Standard (OS)

Module Title: Providing First Level Remote Help Desk Support

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December 2020 Bishoftu, Ethiopia



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L G# 9

LO #1- Analyze client support issues

Instruction sheet

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

- Checking new problems logged by client
- Checking previous logs for similar problems or requests from client
- Investigating and documenting support issues affecting the client
- Notifying the results of investigation and provide advice and support
- Obtaining feedback from client and making changes

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:

- Check new problems logged by client
- Check previous logs for similar problems or requests from client
- Investigate and documenting support issues affecting the client
- Notify the results of investigation and provide advice and support
- Obtain feedback from client and making changes

Read the specific objectives of this Learning Guide.

- **1.** Follow the instructions described below.
- **2.** Read the information written in the "Information Sheets". Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
- **3.** Accomplish the "Self-checks" which are placed following all information sheets.
- **4.** Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Selfchecks).
- **5.** If you earned a satisfactory evaluation proceed to "Operation sheets
- **6.** Perform "the Learning activity performance test" which is placed following "Operation sheets"
- 7. If your performance is satisfactory proceed to the next learning guide,
- **8.** If your performance is unsatisfactory, see your trainer for further instructions or go back to operation sheets "

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Information Sheet 1.1 Checking new problems logged by client

Checking Logged Error and User Activity

In computer science, an error log is a record of critical errors that are encountered by the application, operating system or server while in operation.

Some of the common entries in an error log include table corruption and configuration corruption. Error logs in many cases serve as extremely useful tools for troubleshooting and managing systems, servers and even networks.

Error logs for different applications, operating systems, networks or servers are set up in different ways.

- Some error logs are configured to capture every single error which occurs in the system, whereas some are designed to selectively store error information pertaining to specific error codes.
- Some error logs only capture certain information about the error, whereas others are programmed to capture all available information such as timestamp, system information, and user location and user entry. In many cases, access to error logs need special administrative rights, as these would help as a security measure against providing access to unauthorized resources or users from seeing the error documentation or details.

Error logs are useful in many respects.

In the case of servers and office networks, error logs track issues faced by users and help in root causes analysis of those issues. A network or system administrator can resolve errors more quickly and easily with the information available from the error logs. For webmasters, error log analysis provides information about the issues users encounter and can proactively resolve issues without anyone reporting on them. Error logs also could provide insights on hacking attempts, as most hacking attempts on

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systems and servers result in error or have a high probability of being captured in error logs as the hackers attempt to compromise the system.

Self-Check 1

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

- 1. an error log is a record of critical errors that are encountered by the application, operating system or server while in operation.
 - A. True
 - B. False
- 2. _____for different applications, operating systems, networks or servers are set up in different ways.
 - A. Applications
 - B. Error logs
 - C. Operating system
 - D. All
- 3. Some of the common entries in an error log include
 - A. table corruption
 - B. Configuration corruption.
 - C. A and B
- 4. Error logs in many cases serve as extremely useful tools for troubleshooting and managing
 - A. Systems
 - B. servers
 - C. Networks.

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			Rating:



Operation Title: Checking logged web history

Note: Satisfactory rating half 100%

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

Name:	 Date:	

Purpose:

To acquire the trainees the skill of Checking logged windows events

Equipment, tools and materials required:

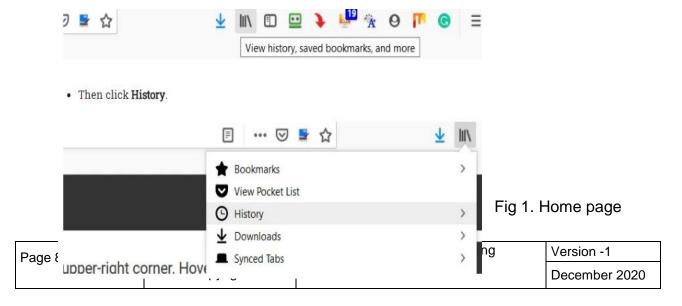
Supplies and equipment needed or useful for checking logged windows events are:

- Desk top or lap top computer installed with the required operating system
- Browser soft wares

Procedures:

Procedures used to Check Your Web History

Step 1. Using Google Chrome, click on the three dots in the upper right-hand corner and click **History**.

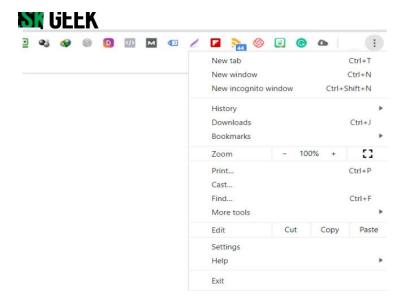




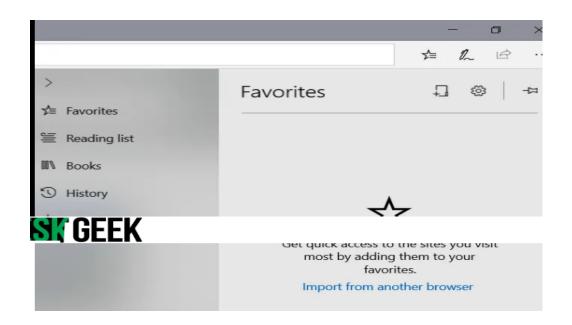
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Step 2 In Firefox, navigate to the icon in the top bar that looks like the image below and click on it.



Step 3 In Microsoft Edge, in the top-right corner of the window, look for and click on the shooting star icon. Then click on **History**.



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Operation Title: Procedures used to Checking logged windows events

Purpose:

To acquire the trainees the skill of Checking logged windows events

Equipment, tools and materials required:

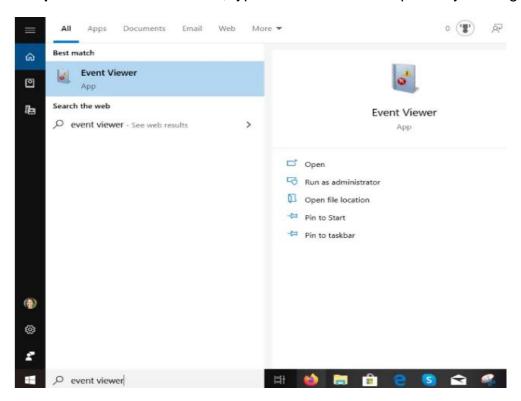
Supplies and equipment needed or useful for checking logged windows events are:

- Desk top or lap top computer installed with the required operating system

Procedures:

To check logged windows event follow the following procedures

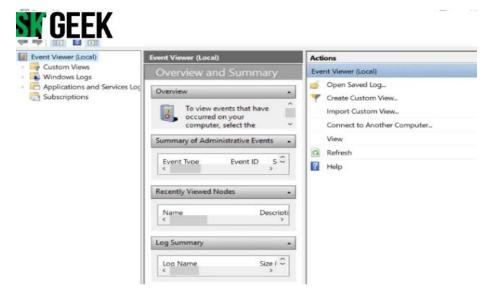
Step 1. From the Start Menu, type event viewer and open it by clicking on it.



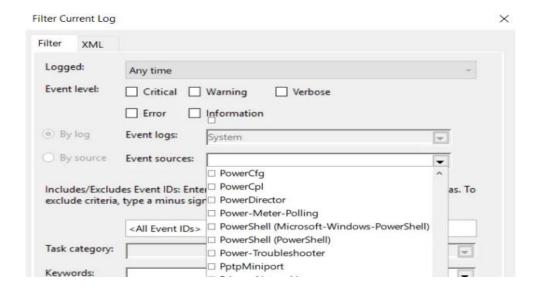
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Step 2. To expand the Windows Logs folder, click on Event Viewer (local) .



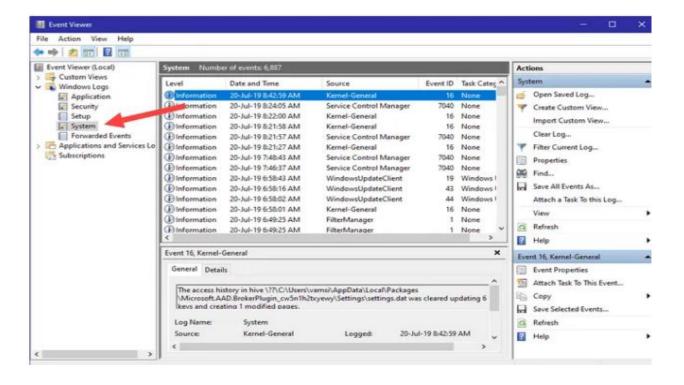
- Step 3. Expand Windows Logs by clicking on it, and then right-click on System.
- **Step 4.** Double-click on **Filter Current Log** and open the dropdown menu for **Event Sources**.
- **Step 5.** Scroll down to **Power-Troubleshooter** and tick the box next to it. Then click **OK**.



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The Windows Event Viewer will show you when your computer was brought out of sleep mode or turned on. If you weren't using it during these times, someone else was.





Lap Test: Practical Demonstration for operation sheet 1 and 2

Name:	Date:
Time started:	Time finished:
Instructions:	

1. You are required to perform the following tasks:

Task 1. Check logged Web history

Task 2. Check logged windows events

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Information sheet 1.2 Checking previous logs for similar problems or requests from client

1.2.1. Solving the problem referring previous logs

The first step in the problem solving and decision making process is to identify and define the problem.

A problem can be regarded as a difference between the actual situation and the desired situation. This means that in order to identify a problem the team must know where it is meant to be and have a clear understanding of where it currently is in relation to the perceived problem.

In order to clearly define the problem the following steps can be followed:

- Agree with the team where the team should be
- Describe and document the problem
- ✓ Agree with the team where the team should be

The Team Purpose, the Team Performance Plan and the Operational Plan can be used to identify where the team should be. If an organized and structured planning process has been followed then the desired position and performance of the team should be clear. However, when a problem arises it is always worthwhile to involve the team members in identifying and understanding the gap between the actual situation and the desired situation. This helps to ensure that all team members understand that a problem exists and that they are an integral part in rectifying the situation.

✓ Describe and document the problem

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In this step it is important to clearly describe and document what you and the team consider the problem to be. This helps to ensure that agreement is reached as to the

problem and provides a starting point for resolving the problem. Describing the problem also ensures that any confusion about the problem is identified and resolved.

A useful technique for describing the problem is to ask a number of questions which can help direct the team to actively think about the problem.

Some questions that can be usefully employed are:

- Why do you think there is a problem?
- What is happening?
- When is it happening?
- Where is it happening?
- Who do you believe is involved?
- Why is it happening?

Note: When asking the question who do you believe is involved? Ask the team to state facts and not to apportion blame.

Once you and the team have worked through these questions the answers should be used to document the problem as specifically and accurately as possible.

The description of the problem should be verified by and agreed with the team. This description can then be used as a starting point for the next step in the problem solving and decision making process: gather information relevant to the problem.

Finally the technician can refer previously documented material for similar problems comes from the clients.

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Self-Check 2

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

- 1. In order to clearly define the problem we have to consider
 - A. Agree with the team where the team should be
 - B. Describing and documenting the problem
 - C. A and B
- 2. Some questions that can be usefully employed to document the identified problem are:
 - A. What is happening?
 - B. When is it happening?
 - C. Where is it happening?
 - D. All
- 3. A problem can be regarded as a difference between the ____situation and the ____situation
 - A. Actual
 - B. Desired
 - C. A and B

Note: Satisfactory rating half 100%

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

Score =	
Rating:	

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Information sheet 1.3 Investigating and documenting support issues affecting the client

1.3.1 Investigating and documenting support issues

The log data you collect from your systems and devices may seem pretty mundane. However, it could contain the precise evidence needed to investigate and successfully prosecute a crime. In order for log data to stand up in court as admissible evidence, you must take care in how you collect, handle and store the data.

When you think of forensic investigations, you probably think of TV shows like CSI and NCIS which glamorize the scientific analysis of crime scene evidence. Such shows lead us to believe that sophisticated crimes can be solved through the forensic analysis of a single fingerprint, hair or fiber. Using exaggerated props and intimate camera angles, the on-screen "investigators" make it look exciting. In reality, forensic investigations involve time-consuming and tedious tasks that require know-how and equipment to perform properly.

What if the crime in question isn't a made-for-TV drama? What if it's a real world case of computer hacking, data theft or business fraud? Forensics, which is the application of scientific methods to problems or questions raised by the legal process, still can be used to find the "digital fingerprint" that provides evidence in the case. When properly collected and handled, this evidence can stand up in court.

Given the insight that logs can provide, it's no surprise that regulations such as the Payment Card Industry Data Security Standard (PCI DSS), the Federal Rules of Civil Procedure (FRCP), the Sarbanes-Oxley Act (SOX), and the Health Insurance Portability and Accountability Act (HIPAA) all mandate the requirement for logs and log management. The information captured by logs can be used to help protect sensitive data and to support incident response and forensic analysis in the event of a suspected data breach or other forms of electronic crime, such as fraud.

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Here are some best practices that can help ensure log data and log management practices properly support forensic investigations.

- Have a clear corporate policy for managing logs across the entire organization.
- Document what is being logged and why, as well as how the log data is captured, stored and analyzed.
- Ensure that 100% of log-able devices and applications are captured and the data is unfiltered.
- Have centralized storage and retention of all logs, with everything in one place and in one format.
- Ensure the time synchronization of logs to facilitate correlating the data and retrieving data over specific timeframes.
- Ensure the separation of duties over logs and log management systems to protect from potential internal threats such as a superuser or administrator turning off or modifying logs to conceal illicit activity.
- Always maintain backup copies of logs.
- Have a defined retention policy that specifies the retention period across the
 organization for all log data. Organizations should work with legal counsel to
 determine the best time frames and have log data incorporated into an overall
 data retention policy.
- Have a defined procedure to follow after an incident.
- Test the incident response plan, including the retrieval of backup log data from offsite storage.
- If an incident or data breach is suspected, there are several steps to take right away:
- Increase the logging capability to the maximum and consider adding a network sniffer to capture additional detail from network traffic. In an incident, it's better to have more data rather than less.
- Freeze the rotation or destruction of existing logs to prevent the loss of potential evidence.

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- Get backup copies of the logs and make sure they are secure.
- Deploy a qualified investigations team to determine the situation.

With the appropriate care, logs can provide solid forensic evidence when and if it is needed. "If your home had been robbed, you would have to tell the police officer what was stolen and how the burglar got in", the same is also true for the network. If you simply tell us you have been broken into, and have no evidence to support it, we may be empathetic, but we can't open a case. Though analyzing log data may not make for an exciting TV drama, it is a necessary step for investigating and successfully prosecuting a crime.



Self-Check1 3

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

	1 3
1.	With the appropriate care, logs can provide solid forensic evidence when and if it
	is needed.
	A. True
	B. False
2.	Write at least 4 best practices that can help to ensure log data and log management practices that can properly support forensic investigations.

Note: Satisfactory rating half 100%

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

Score =	
Rating:	

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Information Sheet 1.4 Notifying the results of investigation and provide advice and support

1.4.1. Providing advice and support for clients on the investigated result

No product or service – or end user – is perfect. This is especially true when it comes to hardware and software. That is why companies, if they want to stay in and grow their business, need to provide help to customers when things go wrong. And while no two products or problems are exactly alike, the best tech support departments share the following eight traits.

Technical support best practices

1. Offer multi-channel tech support, including live chat.

Rather than relying just on email and phone communications, businesses should provide tech support via social media channels, live chat and messaging apps such as WhatsApp. They should also "make sure tech support representatives are readily available and trained to use all channels.

2. Don't keep customers waiting.

- No one likes to be kept waiting, or feel ignored, especially when they have a
 critical (or minor) problem that needs fixing. And when you have an issue, even
 an hour can seem like an eternity.
- So to keep customers from becoming upset (or more upset) and potentially taking out their anger online, make sure your tech support channels are properly staffed. If you don't have someone available to "speak" to a customer right away, give them the option of leaving a message or having someone call or email them back when someone is free, within 24 hours or a business day.
- Similarly, if a rep can't provide a customer with an immediate answer or help to a
 question or problem, make sure they get back to or follow up with the customer
 the next business day.

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3. Provide FAQs and troubleshooting help online (self service).

"It may sound counterintuitive, but the best tech support is when the end user is not asking for help or can help himself," says Farhi. "If you give people the tools... to be self sufficient, then you've been effective in supporting their tech needs." And "there are lots of self-service options."

"Build a knowledgebase and utilize videos to show customers how to resolve the most common issues," suggests Ali Din, general manager & CMO, dinCloud. You can also create an online forum, or forums.

4. Hire well and train representatives properly.

The value of putting the best people into support roles can't be understated. Nothing is more frustrating as a customer than feeling like you know more about a product and problem than the company's own support staff.

5. Use software to keep track of customers and take care of routine tasks.

Thanks to customer support software, customer data is easy to collect and store, providing a comprehensive profile at your agents' fingertips. Just make sure customer data is stored in a central system where your support team can access it. In this way, agents can save time and provide a better customer experience.

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JE		C)		u	NΙ	-

Directions	: Answer all the questions listed below. Use the Answer sheet provided in
	the next page:
1	. Write the different types of technical support best practices
	

Note: Satisfactory rating half 100%

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

Score =	
Rating: _	

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Information Sheet 1.5 Obtaining feedback from client and making changes

1.5.1. Customer feedback

What is customer feedback?

Customer feedback is information provided by customers about their experience with a product or service.

Its purpose is to reveal their level of satisfaction and help product, customer success, and marketing teams understand where there is room for improvement. Companies can collect customer feedback proactively by polling and surveying customers, interviewing them, or by asking for reviews. Teams can also passively collect feedback by providing users a place in the product where they can share comments, complaints, or compliments.

Why is customer feedback important?

Without customer feedback, a company will never know if customers are getting value out of their product. Without knowing if they're getting value, the product and go-to-market teams won't know if they're nurturing loyal customers (not to mention be able to measure customer retention and customer health). And without loyal customers, well...

According to Gartner, "customers' salient experiences with the company heavily influence their long-term switching behavior and reflect the true drivers of loyalty." How does one find out what these salient experiences were? Customer feedback.

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The 7 most effective customer feedback methods

Before you begin collecting feedback from customers, you need to pinpoint why you're seeking their input. Identifying your desired outcomes and outlining the process for getting there sets the groundwork for a worthwhile investment of your time — and your customers' time. Without a clear intention, your feedback may not serve anyone.

Customer Feedback Methods:

- 1. Customer feedback surveys
- 2. Email and customer contact forms
- 3. Usability tests
- 4. Exploratory customer interviews
- 5. Social media
- 6. On-site activity (via analytics)
- 7. Instant feedback from your website

1. Customer feedback surveys

Developing a useful customer survey may be more challenging than you think. There are a ton of questions you could ask customers. The good news: you can choose between short slider surveys (which help you target specific issues) that pop up on your site or longer, traditional surveys.

If you want customers to follow through on completing a survey, make sure you follow some simple best practices.

- Only ask questions that help you meet your goals.
- Write thoughtful open-ended questions.
- Create consistent rating scales.
- · Avoid leading or loaded questions.

2. Email and customer contact forms

Email is one of the easiest ways to gather candid customer feedback. Because it's a support channel for most companies, you can use each interaction as an opportunity to gather feedback.

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3. Usability tests

For usability testing to bring deep insights to your company, it requires more upfront planning. With a clear strategy, though, you can uncover challenges that customers don't know they're facing and actionable insights that make their experiences better. You may even want to consider rewarding your user research participants the way Google does.

4. Exploratory customer interviews

Does direct outreach translate to beneficial feedback from customers? Absolutely! Reaching out to customers directly opens up conversations that otherwise wouldn't happen.

5. Social media

Social listening can give you access to an otherwise untapped reservoir of candid feedback from customers. Direct comments or mentions on social networks aren't the only way for your business to collect customer feedback either — many networks include built-in polling tools.

6. On-site activity (via analytics)

Analytics reveal what customers don't know about how they use your product. Especially if you sell a digital product or service, you benefit from leveraging analytics to understand how users interact with your company. For example, if you offer self-service content as a form of customer service, you could see the number of people visiting each article.

7. Instant feedback from your website

With an embeddable on-site widget like Beacon, you can collect instant customer feedback without asking the customer any questions.

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Self-Check 5

	Answer all the questions listed below. Use the Answer sheet provided in the next page:
1.	Write the 7 most effective customer feedback methods
	

Note: Satisfactory rating half 100%

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

Score =	
Rating:	

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LO #2- Provide advice on software, hardware or network

Instruction sheet

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

- Confirming software, hardware or network requirements
- Investigating and documenting solution for the hardware and software problems
- Documenting additional requirements of investigation
- Obtaining approval from client
- Investigating and documenting amount of technical support
- Discussing and agreeing level of technical support
- Arranging time with client to provide support
- Providing technical support as part of group or one to one instruction
- Providing manuals and help 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:

- Confirm software, hardware or network requirements
- Investigate and documenting solution for the hardware and software problems
- Document additional requirements of investigation
- Obtain approval from client
- Investigate and documenting amount of technical support
- Discuss and agreeing level of technical support
- Arrange time with client to provide support
- Provide technical support as part of group or one to one instruction
- Providing manuals and help documentation

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- 3. Read the information written in the "Information Sheets". Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
- 4. Accomplish the "Self-checks" which are placed following all information sheets.
- 5. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
- 6. If your performance is satisfactory proceed to the next learning guide,
- 7. If your performance is unsatisfactory, see your trainer for further instructions or go back to "operation sheets"

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Information Sheet 2.1 Confirming software, hardware or network requirements

2.1.1. Hard ware and software Requirements

System requirements are the required specifications a device must have in order to use certain hardware or software. For example, a computer may require a specific I/O port to work with a peripheral device. A smartphone may need a specific operating system to run a particular app.

Before purchasing a software program or hardware device, you can check the system requirements to make sure the product is compatible with your system. Typical system requirements for a software program include:

- 1. Operating system
- 2. Minimum CPU or processor speed
- 3. Minimum system memory (RAM)
- 4. Minimum free storage space
- 5. Audio hardware (sound card, speakers,)

System requirements listed for a hardware device may include:

- 1. Operating system
- 2. Available ports (USB, Ethernet,)
- 3. Wireless connectivity
- 4. Minimum GPU (for displays and graphics hardware)

Minimum vs Recommended Requirements

Some products include both minimum and recommended system requirements. A video game, for instance, may function with the minimum required CPU and GPU, but it will perform better with the recommended hardware. A more powerful processor and graphics card may produce improved graphics and faster frame rates (FPS).

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Some system requirements are not flexible, such as the operating system(s) and disk space required for software installation. Others, such as CPU, GPU, and RAM requirements may vary significantly between the minimum and recommended requirements. When buying or upgrading a software program, it is often wise to make sure your system has close to the recommended requirements to ensure a good user experience.

Below is an example of minimum versus recommended system requirements for a Windows application.

- 1. **OS**: Windows 7 with SP1; Recommended: Windows 10
- 2. **CPU**: Intel or AMD processor with 64-bit support; Recommended: 2.8 GHz or faster processor.
- 3. **Disk Storage**: 4 GB of free disk space
- 4. Monitor Resolution: 1280x800; Recommended: 1920x1080
- 5. **Internet**: Internet connection required for software activation.



Self-Check 1

Directions: Answer all the questions listed below. Use the Answer sheet provided i
the next page:
 are the required specifications a device must have in order to use
certain hardware or software.
A. System requirements
B. Network
C. Software program
2. Typical system requirements for a software program include:
A. Operating system
B. Minimum CPU or processor speed
C. Minimum system memory (RAM)
D. All
3. System requirements listed for a hardware device may include:
A. Operating system
B. Available ports (USB, Ethernet,)
C. Wireless connectivity
D. All

Note: Satisfactory rating half 100%

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

Score =
Rating:

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Information Sheet 2.2 Investigating and documenting solution for the hardware and software problems

2.2.1. Documenting solution for the hardware and software problems

Although it is often neglected in the troubleshooting process, documentation is as important as any of the other troubleshooting procedures. Documenting a solution involves keeping a record of all the steps taken during the fix-not necessarily just the solution.

For the documentation to be of use to other network administrators in the future, it must include several key pieces of information. When documenting a procedure, include the following information:

- Date-When was the solution implemented? It is important to know the date because if problems occur after your changes, knowing the date of your fix makes it easier to determine whether your changes caused the problems.
- Why-Although it is obvious when a problem is fixed while it is done, a few weeks
 later, it might become less clear why that solution was needed. Documenting why
 the fix was made is important because if the same problem appears on another
 system, you can use this information to reduce time finding the solution.
- What-The successful fix should be detailed, along with information about any
 changes to the configuration of the system or network that were made to achieve
 the fix. Additional information should include version numbers for software
 patches or firmware, as appropriate.
- Results-Many administrators choose to include information on both successes
 and failures. The documentation of failures can prevent you from going down the
 same road twice, and the documentation of successful solutions can reduce the
 time it takes to get a system or network up and running.

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 Who-It might be that information is left out of the documentation, or someone simply wants to ask a few questions about a solution. In both cases, if the name of the person who made a fix is in the documentation, the person can easily be tracked down. This is more of a concern in environments in which there are a number of IT staff, or if system repairs are performed by contractors instead of company employees.

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Self-Check 2

ions:	Answer all the questions listed below. Use the Answer	sheet	provided	in
	the next page:			
Write	the several key pieces of information when preparing	the do	cument fo	or
future	use.			
				_
				_
				_
				_
				_
				_
	Write	the next page:	the next page: Write the several key pieces of information when preparing the do	Write the several key pieces of information when preparing the document for

Note: Satisfactory rating half 100%

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

Score =	
Rating:	

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Information Sheet 2.3 Documenting additional requirements of investigation

2.3.1. Requirements Documentation

Requirements documentation is the description of what a particular software does or shall do. It is used throughout development to communicate how the software functions or how it is intended to operate.

It is also used as an agreement or as the foundation for agreement on what the software will do. Requirements are produced and consumed by everyone involved in the production of software, including: end users, customers, project managers, sales, marketing, software architects, usability engineers, interaction designers, developers, and testers.

Requirements comes in a variety of styles, notations and formality. Requirements can be goal-like (e.g., distributed work environment), close to design (e.g., builds can be started by right-clicking a configuration file and select the 'build' function), and anything in between. They can be specified as statements in natural language, as drawn figures, as detailed mathematical formulas, and as a combination of them all.

The variation and complexity of requirements documentation makes it a proven challenge. Requirements may be implicit and hard to uncover.

It is difficult to know exactly how much and what kind of documentation is needed and how much can be left to the architecture and design documentation, and it is difficult to know how to document requirements considering the variety of people who shall read and use the documentation. Thus, requirements documentation is often incomplete (or non-existent).

Without proper requirements documentation, software changes become more difficult and therefore more error prone (decreased software quality) and time-consuming (expensive).

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The need for requirements documentation is typically related to the complexity of the product, the impact of the product, and the life expectancy of the software.

If the software is very complex or developed by many people (e.g., mobile phone software), requirements can help to better communicate what to achieve. If the software is safety-critical and can have negative impact on human life (e.g., nuclear power systems, medical equipment, mechanical equipment), more formal requirements documentation is often required.

If the software is expected to live for only a month or two (e.g., very small mobile phone applications developed specifically for a certain campaign) very little requirements documentation may be needed. If the software is a first release that is later built upon, requirements documentation is very helpful when managing the change of the software and verifying that nothing has been broken in the software when it is modified.

Traditionally, requirements are specified in requirements documents (e.g. using word processing applications and spreadsheet applications). To manage the increased complexity and changing nature of requirements documentation (and software documentation in general), database-centric systems and special-purpose requirements management tools are advocated.



Self-Check 3

Direct	tions: Answer all the questions listed below. Use the Answer sheet provided in
	the next page:
1.	is the description of what a particular software does or shall do.
	A. Organization requirement
	B. System requirement
	C. Requirements documentation
	D. All
2.	Requirements comes in a variety of styles, notations and formality.
	A. True
	B. False
Note:	Satisfactory rating half 100%

Score =	
Rating:	

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



Information Sheet 2.4 Obtaining approval from client

Approval Process and Workflow

In any organization, work often needs to be formally approved before it can begin. Budgets, creative projects, marketing initiatives, invoices, and many other work items all move through a series of approvals before they are considered either ready for kickoff or complete. Many organizations create specific approval processes or workflows that dictate how work should be approved (or rejected) every time to save time and ensure standardization.

What Is an Approval Process?

An approval process is the method an organization uses to approve anything from documents, invoices, budgets, and purchase orders, to a new process that a company wants to institute. Implementing an approval process can standardize an organization's internal processes, and also save time by creating a dependable, repeatable system. Approval processes are a type of workflow, which is any sequence of work from initiation to completion, that you can create to ensure work is approved the same way every time.

Creating an approval process can simply mean defining the procedures that you will follow to approve work. You can choose to create a manual approval process where employees follow specified steps and have a manual record of completion, or no record at all. Manual approval processes can be extremely tedious and time-consuming, which can lead to delayed delivery of goods, missed payments, poor document management, and a non-uniform approval process. Additionally, manual processes tend to be less transparent, so some employees might not be aware of the processes and therefore less compliant.

As a result, many organizations have transitioned to automated approval processes and workflows. Companies can use software to create a tailored approval process, which then guides users through that process to ensure work is completed and approved the

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same way every time. The main benefits of automated approval processes include saving time, maximizing efficiency, and standardizing processes.

Elements of an Approval Process

While each approval process will differ based on its purpose or the organization's specific requirements, there are some general tasks that you will likely include when designing your own. These include:

- Submission: An approval process usually begins with someone submitting something (a document, invoice, purchase order, etc.). You'll need to create a submission portal where users go to submit their work. Think about including a submission receipt option, so submitters have a record of their activity.
- Assign Approvers: The approval process hinges on someone else (not the submitter) approving the work, so you'll need to identify the person or people who have the final say. If your process has multiple approval levels, define who will approve which aspects of work at each level.
- Set Permission Levels: Define the level of authority each user should have.
 Most systems have features to delineate among viewer, editor, and administrator permissions, so you can control who edits, rejects, or approves submissions.
- **Set Due Dates:** As with any project, it's important to set deadlines to keep your workflows moving and prevent work backlogs.
- Automatic Alerts and Notifications: A program that automatically sends alerts
 and notifications about the status of a submission can help expedite workflow.
 Automatic alerts may be approval or rejection notifications, update requests
 (where the approver requests that the submitter makes changes to the original
 submission), or a simple status update alerting users that work is advancing to
 the next step in the process. Submissions may have to go through multiple
 rounds of edits before they are approved, so automatic alerts and notifications
 can ensure that items are accomplished quickly and that everyone is aware of
 the current status.

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- Record/Log: Having a record of every step in the approval process is one of its
 greatest benefits for increasing transparency and ensuring consistency. If you
 plan on using an automated solution, look for a program that offers the following
 capabilities:
 - ✓ View User History: See who has made changes, to what, and when.
 - ✓ Lock Record: This will make the record un editable, so that no user can change the log of actions.
 - Edit Record: In some cases, you might want the record to be kept editable
 for instance, if you made a mistake or need to keep certain information private from other parties.

Software Systems That Support Creating Approval Processes

There are a variety of software tools that you can use to design and build custom approval processes and workflows using the elements defined in the previous section. The most common tools include Share point, Salesforce, and Microsoft Office programs such as Microsoft Flow. Regardless of which system you choose, look for a program that supports the following functionality (note that some of these items are named differently in certain products, so make sure you understand the utility of the feature):

- Create Discrete Steps: An approval process is only effective if there are clear, defined, and repeatable steps. Choose a program that allows you to write discrete steps that users can easily follow and repeat an infinite number of times.
- **Templates and/or Built-In Workflows:** Pre-built templates are helpful if you'll be creating multiple workflows for a variety of specific use cases. This way, you won't have to start from scratch every time, or hard-code any parameters.
- **Customization:** Although built-in workflows can help you get started, you may want to retain some flexibility. Choose a program with customization options so you can tailor your process; if it doesn't fit your needs, there's no benefit.

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- Edit Capabilities: Once you build your workflow and start using it, you might need to make changes to the procedures you initially put in place. Systems that allow editing will save of time.
- Mobile Features: Solutions that offer mobile capabilities enable your team to submit work, receive notifications, make requests, and approve work from their phone or tablet.
- **Signature Collection:** If you're approving sensitive or highly important documents and information, you may require a signature. Some programs offer signature collection so that you can verify approvals.
- Feedback Collection: Perhaps you want to create a workflow that elicits feedback, rather than approves work. In this case, look for a program with qualitative collection capabilities. This might be a template option within a larger system (as in Sharepoint, for example).
- **Notification Templates:** You might also want to send notifications in a specific way, such as an in-app notification, email, or push notification on another device.



Self-Check 4

	the next page:
1	is the method an organization uses to approve anything from
do	cuments, invoices, budgets, and purchase orders, to a new process.
	A. approval process
	B. Work flow
	C. Log
2.	: See who has made changes, to what, and when. A. View User History B. Feedback collection C. Edit record
3.	: This will make the record un editable, so that no user can
cł	nange the log of actions. A. Lock Record B. Customization C. Logging problem

Note: Satisfactory rating half 100%

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

Score =
Rating:

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Information Sheet 2.5 Investigating and documenting amount of technical support

2.5.1. Documenting amount of technical support

Providing good IT supports for clients is vital to the effective operation of any organisations, so you may find there are established procedures for determining and addressing client support issues. In this Learning guide you will learn about these procedures, as well as the general skills and knowledge needed to record clients' support need with IT problems.

Client Support Roles

Information technology is an integral part of the operation of modern organisations or businesses. Users of information technology need timely, high-quality support. In addition to sound technical skills, IT support staff should have a range of skills that improve their ability to successfully provide IT services to their clients.

The most important skills needed by the IT professional who is working as a help desk person to record the clients' support requirement are:

- Technical skill
- Active listening skill
- Professional act
- Following organizational rules and regulations
- Good conduct
- Following call handling processes
- Customer handling skill, etc

The circumstances in which you are required to provide advice on IT problems will depend on the nature of your organisation. Some organizations may rely on local IT businesses to provide support, or take out a contract with a company which provides IT

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support services. A growing to provide IT support to

area of IT is businesses specifically set up

organisations. These companies provide employment opportunities for individuals with the right skills and knowledge.

Many medium and large organisations provide a centralised help desk support service. Clients with IT problems report these to the help desk. Support is typically provided for areas such as:

- Hardware and software faults
- Networking problems (including login problems)
- Email and Internet problems
- Consultation on purchasing information technologies
- Installation and configuration hardware
- Training needs
- Printing problems
- Software installation and upgrade etc

Help desks will often provide additional services to those listed here, depending on the needs of the organization. This can be performed in-house, or external training providers can be called in.

Recording Client's support Request

If you are on the help desk and a client rings, fax, e-mail or come in person and request for support, what details do you ask them to provide? In larger organisations, particularly there is usually specialist software in which these calls are recorded.

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Below is a sample of a typical data entry form for recording details of client requests. Examine the type of information you need to record. The following table shows sample of a typical data entry form

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Table 1

Entry

Document the Client's Requirements and Report

After analysis of the client's requirements, you should fully document the client's requirements and report them to your supervisor.

This document may take the forms, but would include the following:

- background information such as company details
- problems and issues that may have led to the client's request
- questions asked during your meeting with the client and their answers to those questions, as well as a list of any essential criteria
- other options or possibilities of which the client may not have been aware

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 Any information for the client that will help them understand what they're getting into before you go ahead with the job (or project).

Self-check 5

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

1.	write the important skills needed by the IT professional who is working as a help desk person :
2.	write areas on which support is typically provided

Note: Satisfactory rating half 100%

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

Score =	
Rating:	

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Information Sheet 2.6 Discussing and agreeing level of technical support

Service-level agreement

A **service-level agreement** (**SLA**) is a commitment between a service provider and a client. Particular aspects of the service – quality, availability, responsibilities – are agreed between the service provider and the service user. The most common component of an SLA is that the services should be provided to the customer as agreed upon in the contract. As an example, Internet service providers and telecom will commonly include service level agreements within the terms of their contracts with customers to define the level(s) of service being sold in plain language terms. In this case the SLA will typically have a technical definition in *mean time between failures* (MTBF), *mean time to repair* or *mean time to recovery* (MTTR); identifying which party is responsible for reporting faults or paying fees; responsibility for various data rates; throughput; jitter; or similar measurable details.

A well-defined and typical SLA will contain the following components:

- Type of service to be provided: It specifies the type of service and any additional
 details of type of service to be provided. In case of an IP network connectivity, type
 of service will describe functions such as operation and maintenance of networking
 equipment, connection bandwidth to be provided, etc.
- The service's desired performance level, especially its reliability and responsiveness: A reliable service will be the one that suffers minimum disruption in a specific amount of time and is available at almost all times.
 - A service with good responsiveness will perform the desired action promptly after the customer requests it.
- Monitoring process and service level reporting: This component describes how the performance levels are supervised and monitored. This process involves

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gathering different type of statistics, how frequently these statistics will be collected and how they will be accessed by the customers.

- The steps for reporting issues with the service: This component will specify the
 contact details to report the problem to and the order in which details about the
 issue have to be reported. The contract will also include a time range in which the
 problem will be looked into and when the issue will be resolved.
- Response and issue resolution time-frame: Response time-frame is the time
 period by which the service provider will start the investigation of the issue. Issue
 resolution time-frame is the time period by which the current service issue will be
 resolved and fixed.
- Repercussions for service provider not meeting its commitment: If the provider
 is not able to meet the requirements as stated in SLA then service provider will have
 to face consequences. These consequences may include customer's right to
 terminate the contract or ask for a refund for losses incurred by the customer due to
 failure of service.



Self-Check 6

Direct	ions:	Answer all	the questio	ns listed b	elow. Us	se the A	Answer sheet	provided in
		the next pag	ge:					
1.	Α	is a cor	nmitment be	tween a se	ervice pro	ovider a	nd a client	
	A. Te	echnical sup	port					
	B. se	rvice-level a	greement (S	SLA)				
	C. Do	ocumentatio	n					
2.	Write	at least 4 c	omponents o	of service l	evel agre	eement:		
Note:	Satisf	actory ratir	ng half 100%	6				
		_	er for the cop		rrect ans	swers.		
		-	•	•		Γ	Score -	
							Score = Rating:	

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Information Sheet 2.7 Arranging time with client to provide support

2.7.1. Scheduling Client Appointments

Coordinating appointments requires a high level of organization, so setting up an effective scheduling system for clients is essential.

Common Problems & Solutions during client appointment

- Paper calendars get messy and are hard to keep organized. An online service takes the stress out of appointment scheduling for both you and your clients.
- 2. **Phone tag is time-consuming.** Online scheduling eliminates the awkward phone tag with clients during business hours. If your customers have the option to schedule with you 24 hours a day, seven days a week, they're likely to use your service more often
- Scheduling with multiple people is even more time-consuming. When
 proposing appointment times, offer 2-3 options your potential customers are
 likely to be happy with, especially if the meeting involves more than one
 participant.
- 4. Clients cancel at the last minute. Using some application software, consider including your cancellation and no-show policy in the descriptive text of your sign up, so your clients will know your policies prior to scheduling an appointment.
- 5. Clients worry about security and privacy when scheduling. When creating your sign up, you can customize privacy settings to choose the right level of security. For instance, you can hide the names of clients when they sign up for appointments.

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- 6. You need a better system to keep track of payments. You can collect payments for appointments at the same time. This helps to simplify record-keeping and ensure timely payment for services.
- 7. **The details get lost in communication**. Make sure clients know what to expect and are prepared for the appointment by using our custom notification feature
- 8. **No shows happen**. No shows are frustrating and result in lost time and revenue for small business owners, so ensure you have a consistent reminder system in place.
- 9. **Rescheduling is a chore**. Say you sent a text or email reminder and an individual still didn't show. Make it easy for them to reschedule by posting open appointments slots that they can choose from.

Don't Forget to Follow Up

- 1. **Get the word out.** After appointments, consider sending clients home with a coupon to share with friends or family and offer incentives for referrals.
- 2. Show your gratitude. Send a follow-up email from your sign up account to thank clients after their appointments. This thoughtful gesture will build a connection with your clients and help you develop meaningful relationships with them.
 Online scheduling can save valuable time each day that you can spend on the things that matter most to you.



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~ O	IT-		ממ	\sim	
			16	LA	•

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

1.	Write each problems with their solutions during client appointimenting

Note: Satisfactory rating half 100%

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

Score =	
Rating:	

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Information Sheet 2.8 Providing technical support as part of group or one to one instruction

Technical support provided by technical support specialists

Technical support specialists are knowledgeable about computer systems, electronic systems, and software applications. They can educate people, answer questions, and troubleshoot any related problems about technology-based products and services. When helping customers and end-users, the technical support specialist will ask specific questions in order to understand the issue.

Since most customers are not familiar with technical terms and may be frustrated in trying to explain the problem, the support specialist will require patience, good listening skills and excellent communicating skills.

Some technical support specialists works internally for a company, and their job includes conducting on-going testing of the company's existing equipment and software programs.

If new software or hardware is received, they will test the product, provide feedback to the vendor, and make sure the products are compatible with the company's existing products and systems.

When systems are re-vamped company-wide, the technical support specialist will set up training sessions to introduce the new software or hardware to the employees, explaining how they work in layman's terms.

One-on-one training is sometimes provided for managers in each department of the company.

Technical support specialists have distinct personalities. They tend to be investigative individuals, which means they're intellectual, introspective, and inquisitive. They are

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curious, methodical, rational, analytical, and logical. Some of them are also conventional, meaning they're conscientious and conservative.

Self-Check 8

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

1. Write each problems with their solutions during client appointment

Note: Satisfactory rating half 100%

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

Score = _____ Rating: _____

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Information Sheet 2.9 Providing manuals and help documentation

User documentation

Technical documentation refers to the documentation that describes how a product or service operates. For example, software code documentation, technical specifications and API documentation.

User documentation refers to the documentation for a product or service provided to the end users. The user documentation is designed to assist end users to use the product or service. This is often referred to as user assistance. The user documentation is a part of the overall product delivered to the customer.

Traditionally user documentation was provided as a user guide, instruction manual or online help. However, user documentation is increasingly being delivered online today. This has enabled technical writers to be more imaginative in how they assist users.

User documentation is important because it provides a avenue for users to learn:

- 1. how to use your software
- 2. features of your software
- 3. tips and tricks of your software
- 4. how to resolve common problems with your software

Without user documentation, a user may not know how to do the above things.

Users expect the user documentation to include:

- FAQs
- Video tutorials
- Embedded assistance (for example, tool tips and dynamic page content)
- Support Portals

What does user documentation usually include?

The list below is used with gratitude from the Dartford computer science department

Minimum hardware and software requirements

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Installation guide

- How to start the system
- · How to use different features of the system
- Screenshots explaining main features of the system
- Example inputs and outputs
- Explanations of error messages and troubleshooting guides
- Information to contact the developer of the system if an undocumented question arises

The quality of user documentation can affect the rate of implementation of the new system. Examples should include methods such as: help files, online support and printed manuals.

Evaluating user documentation

Method	Advantages	Disadvantages
help files	User friendlyreally fasteasy to usecan be accessed offline	 you might not get level of detail you want the user might not know what to search for Might be hard to find
online support	 larger amount of information easier to update can access from any device can be faster 	 can't be accessed offline if you have slow internet connection, it's bad.
printed manuals	easy to findyou can browse through themwork without a computer	 slower if you lose it, you're going to have a bad day harder to search cannot be updated

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• prone to physical destruction

Self-Check	9
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Directions:	Answer all the questions listed below. Use the Answer sheet provided in
	the next page:
1.	refers to the documentation that describes how a product of
	service operates.
	A. Technical documentation
	B. Feedback
	C. Helpdesk
2.	User documentation should include:

Note: Satisfactory rating half 100%

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

Score =
Rating:

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L G# 9 LO #3- Obtain client feedback

Instruction sheet

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

- Creating an appropriate evaluation or feedback form
- Providing client with instructions how to complete the form
- Distributing evaluation or feedback
- Reviewing feedback

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:

- Create an appropriate evaluation or feedback form
- Provide client with instructions how to complete the form
- Distribute evaluation or feedback
- Review feedback

Read the specific objectives of this Learning Guide.

- 1. Follow the instructions described below.
- 2. Read the information written in the "Information Sheets". Try to understand what are being discussed. Ask your trainer for assistance if you have hard time understanding them.
- 3. Accomplish the "Self-checks" which are placed following all information sheets.
- 4. Ask from your trainer the key to correction (key answers) or you can request your trainer to correct your work. (You are to get the key answer only after you finished answering the Self-checks).
- 5. If you earned a satisfactory evaluation proceed to "Operation sheets
- 6. Perform "the Learning activity performance test" which is placed following "Operation sheets",
- 7. If your performance is satisfactory proceed to the next learning guide,
- 8. If your performance is unsatisfactory, see your trainer for further instructions or go back to "operation sheets"

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Information Sheet 3.1 Creating an appropriate evaluation or feedback form

3.1.1. Creating Evaluation Form for the provided service

What is an Evaluation Form?

An evaluation form is a document used to measure an employee's workplace performance. One of the keys to the success of your performance management process is to have good service evaluation forms.

How to Create an Evaluation Form

The key to service evaluation form is making sure you collect all the necessary information in one easy-to-understand sheet. Once you figure out what aspects of performance are important to you, make sure those are well represented on the form either on a numeric scale or in an open-ended form for more elaborate feedback. Smart Draw makes creating forms easy by including a number of commonly used employee evaluation form templates. Just open one of these templates and customize them to suite your needs. Add your own company logo, change one or two performance metrics, and print.

Best Practices When Creating an Evaluation Form

- Make it easy to use. Ensure that the information your evaluation form seeks is clear and concise. Provide easy-to-understand instructions for the employee and manager as they complete the form. It should provide HR and executives the information they need to make strategic decisions about the workforce. You may choose to encourage managers to use the S.M.A.R.T. (specific, measurable, achievable, and time-bound) goal methodology when defining goals for themselves as well as their team.
- **Determine the focus of the form.** There needs to be a clear purpose. The form should include clear guidelines and instructions to allow managers and

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employees to know exactly what information to provide, the meaning of the ratings, and how to get the information they need.

• Establish a clearly defined rating scale. It's important to keep the ratings fair, consistent, and as objective as possible. Include a descriptive rating scale throughout the evaluation form. The traditional five-point scale, or Likert scale, is one that employees expect. With a Likert scale, managers have the option to select the mid-point value of three, which doesn't necessary distinguish high from low performers. If you prefer to encourage your managers to rate employees as either above or below average, you may choose to use an even-numbered rating scale (e.g., a four-point scale).

2000 2000 000	Location:	
	with the customer service we provided you?	
☐ Yes	□ No	
Comments		ation
		Temp
2. Was our customer:	service provided to you in an accessible manner?	
☐ Yes	□ No	
☐ Yes Comments	□ No	
	No No	
	No No	



Technical Support Satisfaction Survey Questions + Sample Questionnaire Template

Technical support satisfaction survey questions to evaluate the effectiveness of support provided to customers. This sample questionnaire gathers insight on the quality of solution provided, overall satisfaction measurement, and time bound effectiveness etc.

How satisfied are you with the OVERALL quality of service you received?

- Very satisfied
- Somewhat satisfied
- Dissatisfied
- Very dissatisfied
- N/A

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Do you consider the problem resolved?
· Yes
O No
Was your question or issue resolved the first time you contacted technical support?
· Yes
C No

How satisfied are you with this particular phone support experience?

How satisfied are you with this particular phone support experience?

Each survey question also needs a method of answering. There are a few options to consider:

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Scales:

- On a scale of 1-5
- Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree

Multiple choice:

- Password Issues | Computer Issues | Networking Issues | Access Issues |
 Other
- Daily | Weekly | Monthly | Infrequently | Never

Either/or:

- True/False
- Yes/No

Open-ended:

- Please explain...
- Provide details...



Self-Check 1

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Information Sheet 3.2 providing client with instructions how to complete the form

3.2.1 Instructions provided by technical support on how to fill Feedback Form What one should do:

- Fill out feedback based only on the facts
- Provide feedback with the single intent of improving performance
- Offer feedback regarding issues that can be controlled
- · Feedback should only be offered in private
- To use feedback to reward achievements and correct errors

What one shouldn't do:

- Do not let emotions take over during feedback
- Not use the main problem to generalize other problems
- Not letting situations get out of hand before they are uncontrollable
- Do not give comments regarding issues out of an employee's control
- Using feedback as a way to personally attack the employee.

The information is very useful in the event that you would like to utilize forms such as Training Feedback Forms where you provide feedback on one's performance.

How to Fill Customer out Feedback Forms

When filling out customer feedback forms, then be sure the following information is included:

- · Name of the customer
- · Date of when the feedback was made

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- Type of feedback being compliment)
 - · What service or issue is being given feedback
- Details or additional information regarding whatever you are giving feedback to If you intend on filling out forms such as Presentation Feedback Forms wherein you place in information to help you race certain aspects of a particular person, service or event, then go through our sample feedback forms to help you know how to properly fill out any of them.

made (either a suggestion, complaint, or

Guidelines for Filling Feedback Forms

- Provide all information you are required to place in. So that includes, but not limited to, your name, date of the feedback, job position and more.
- Always make sure to provide a statement regarding the purpose of the feedback.
- Remember to remain truthful when providing feedback to any person, product, service, or event.
- When providing additional comments, do so in a professional manner.



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Directi	ons: Answer all the questions listed below. Use the Answer sheet provided in
	the next page:
	1. Write guidelines required to filling feedback forms
-	
-	
-	
_	

Note: Satisfactory rating half 100%

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

Score = _	
Rating: _	

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Information Sheet 3.3 Distributing evaluation or feedback

3.3.1. Ways to Distributing Evaluation or feedback form for clients

Publishing feedback form template.

Configuring your customer feedback form is a piece of cake, and online distribution is even easier. Our publishing tool offers multiple choices for sharing: you can either embed the form on a web page, send the form link via email or messenger apps, or choose to send it to any social platform you like. And if we live in a mobile-dependent environment, the customer feedback form template can be used by any smartphone user.

Collect & manage data

Customer feedback is stored in a secure repository and you can manage form responses from the Submissions section of your form. You also have the option of exporting all your data in PDF, Excel or CSV. Configuring the Reports section will provide you with a better picture of how customers see your products, with the aid of visual reports and graphs.

Optimize your flow

Improving one's business is a relentless process that relies upon the collection of customer feedback. Gathering user's thoughts is easier done with online forms. Each time a customer submits his opinions via the given form, you will get an instant email or SMS notification. Improve customer retention and automate your feedback gathering tactics today!

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

1. Write those activities we should perform during Evaluation or feedback form distribution for clients

Note: Satisfactory rating half 100%

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

Score = _____ Rating: _____

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Information Sheet 3.4 Reviewing feedback

3.4.1. Reviewing the collected feedback for future improvements

What to do when you receive customer feedback



Everyone always talks about getting customer feedback. However, what do you do once you actually get that feedback? How do you begin implementing it into your company? And how do you respond to the customer?

Determining Useful Vs. Useless Feedback

It can be difficult to decide whether a customer's feedback is actually geared towards helping you improve your business or if it's simply an attempt to bash your company. Here are the ways you can tell the difference between these two kinds of negative feedback. For an explanation of the specific kinds of negative feedback.

5 Types of negative customer feedback (Who Should You Listen To) from Customericare

Useful Feedback

• It points out an actual pain point or problem.

This feedback has a point. A customer has faced an issue with your product or service and is reflecting on it. There is something for you to mend or improve in this situation.

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It would benefit others to implement this feedback.

This feedback isn't solely the opinion of an individual customer. Typically, it reflects the thoughts of several customers, some of whom may not have spoken up about it. Taking this feedback into consideration would improve the experiences of many of your customers, and, thus, might be a good investment to make.

It's fairly long or detailed.

This feedback shows time and thought. It's clear the customer carefully crafted their feedback, which means that they care about your business's growth. This is a tip-off that their feedback could really improve your product or service.

• It may suggest one or two improvements, but not a complete change.

This feedback isn't suggesting that you reconsider your entire company strategy, mission, or industry. Instead, the customer is offering some opportunities for growth or improvement that can be easily tweaked within your overarching company strategy.

It generally veers on the polite side.

This feedback is relayed in a fairly kind manner. The customer doesn't feel any need to attack your company or be aggressive. They simply want to relay their thoughts in the hopes that you'll consider them for the future.

Useless Feedback

It doesn't have a clear pain point or problem.

This feedback doesn't have a specific issue for you to track and take into consideration. There is no way for you to try to "solve" a problem for this customer and improve their experience.

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• It differs from the feedback others are giving.

This feedback is bringing up a brand-new point. It doesn't seem like any other customers or prospects are facing a similar experience with your product or service.

• It's on the shorter side.

This feedback could potentially be a short burst of angry typing. It doesn't include a lot of details on the situation and doesn't show signs of clear-headed thought.

It suggests you change your entire company strategy.

This feedback advises you to make large-scale changes to your company. Implementing such changes would not only be a huge financial investment for you, but it would also take an extended amount of time and require rebranding.

It's rude.

This feedback is relayed in a harsh way. There doesn't seem to be a basic appreciation for your company. This customer or prospect simply wants to criticize your business without being constructive.

We've compiled the following list of steps to take after receiving both negative and positive feedback.

How to Respond to Negative Feedback

· Review the feedback carefully.

Upon receiving negative feedback, you should take the time to read it over carefully. This first glance-over can help you determine whether or not the feedback is useful and how, then, you should respond to it.

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Consider, too, the platform by which the customer or prospect submitted the feedback. Was it on a public channel, like Yelp or your social media? Or was it sent privately via email, live chat, or a direct message on social media? If the feedback is public, you may want to speed up your review process and craft a response as soon as possible.

Ask for reinforcements.

Depending on the level of negativity in the feedback, you may want to call for backups. It will be beneficial for you to run the feedback by a coworker or manager and get their thoughts. Being the person you directly received the feedback, you might be feeling angry and frustrated, and it's helpful to have a third-party individual to ensure you don't respond with aggression.

Others can also help you determine the best plan of action based on the usefulness or uselessness of the feedback.

Aggregate feedback.

Is this feedback normal? Are others reaching out with similar ideas? Or is this on a case-by-case basis? By bringing together recent feedback and analyzing it, you can come to these conclusions and generalize your responses to all similar feedback.

Craft an appropriate response.

After you've cleared your head and gotten all the information you need on the matter, you can begin drafting a response. You want to remain polite and get your point across as efficiently as possible.

If the feedback is on a public platform, try to move the conversation on to email or phone. No matter what, you want to keep your company in a good light and say nothing that could tarnish your reputation. For more information on responding to customer complaints, check out this post on **customer service email templates**.

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Consider their feedback.

If you've determined their feedback qualifies as useful, you won't want to have the interaction end with the response. Although negative, the feedback was meant to improve both customers' experiences and your company. Think about the ways in which you can implement their feedback to make a stronger, more customer-centric front.

It's up to you and your company to determine whether the profits outweigh the loss in this instance. Creating customer-advised changes will consume time and money and will run the risk of failure. However, if you want a mutually-beneficial relationship with your customers, you have to put some faith in them, too.

How to Respond to Positive Feedback

Review the feedback.

Just because it's positive doesn't mean you can read it once and throw a celebration. Positive feedback should still be reviewed for key takeaways. What exactly does the customer or prospect love about your company?

Even positive feedback can offer some advice for improvement. Take advantage of their positive, polite approach and take their recommendations into consideration. Note them down to be passed off to the appropriate team.

Thank them and throw in a company promo.

Of course, your first order of business should be to thank them for their lovely feedback. According to **HubSpot Research**, only 23% of customers have sent a positive email to a company, and only 20% have written a positive online review. So, clearly, it's rare that customers directly offer positive feedback to companies.

Since you know that they're a fan of your brand, why not throw in a small promo? Maybe add in that you're releasing a new product soon, or that you're having a big sale next month. Treat these customers as brand evangelists, and, hopefully, they'll spread the word.

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· Consider sharing the feedback.

If the feedback isn't already public, and the customer is comfortable with it, it could be a great badge on your online presence to publish their feedback for the world to see. You could post it on your website and social media and send it out in your email newsletter.

Your customer will love their time in the spotlight. But, even more so, your prospects will get a taste of what your business has to offer. Customers trust the word of other customers, and sharing positive feedback is a great way to keep that loop going.

Pass the service-qualified lead onto sales.

Now that you've confirmed that they are interested in your brand, find out whether or not they are a current customer. If so, hooray! Your company is exemplifying extraordinary customer loyalty and, thus, retention.

If they aren't, this is a perfect opportunity for your sales team to tackle. First, confirm whether they are a **service-qualified lead**. Then, handoff their information to the sales team and have them work their magic.

After all, the best way to exercise **inbound marketing** is by attracting strangers, who turn into visitors, who are then converted into leads, who are then closed as customers, and who then are delighted so much that they become promoters. This is just one step in that whole process, but still, a key step.

Ask for referrals.

You can probably assume that these customers are going to be brand evangelists. However, to make the most of this interaction, consider asking them directly for referrals.

Customers who are having a positive experience with your company will want the same for their friends, family, or colleagues, even if they don't outright make that connection in their minds. So, make the connection for them. Phrase it as a way to improve the experiences of their close ones, not as a means for you to gain more customers. And, make it easy **to ask for referrals** by offering your customers an email template they can send directly to others.

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Self-Check 4

Directions:	Answer all the questions listed below. Use the Answer sheet provided in the next page:
1.	Write the 5 Types of negative customer feedback (who should you listen to)
2.	Write how to respond to Positive feedback
3.	Write how to respond to Negative feed back

Note: Satisfactory rating half 100%

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

Score =	
Rating:	

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References

- 1. Help Desk 100 Success Secrets (Author Gerard Blokdijk)
- 2. "Documentation definition by The Linux Information Project". www.linfo.org. Retrieved 9 August 2020.
- 3. ^ N/A (2003). "Guide to Documentation" (PDF). Archived from the original (PDF) on 29 July 2007.
- 4. ^ CGRP. "A Guide to Documentation Styles" (PDF). Retrieved 12 June 2009.
- 5. ^ N/A. "A guide to MLA documentation" (PDF). Archived from the original (PDF) on 2 September 2006. Retrieved 12 June 2009.
- 6. "...the four most important attributes about documentation include its content, maintenance, availability and use of examples." Page 58 of http://www.site.uottawa.ca/~tcl/gradtheses/aforward/aforward_thesis.doc
- 7. The importance ocumentation: http://searchsmb.techtarget.com/originalContent/0,289142,sid44_gci1251087,00.html



Answer Key for Module Title: Providing First Level Remote Help Desk Support

LO #1 Analyze client support issues	
Self-Check 1	Written Test

- 1. True
- 2. B
- 3. C
- 4. A

LO #1 Analyze client support issues		
Self-Check 2	Written Test	

- 1. C
- 2. D
- 3. C

LO #1 Analyze client support issues		
Self-Check 3 Written Test		
4 4		

1. A

2.

LO #1 Analyze client support issues		
Self-Check 4	Written Test	

1.

- Offer multi-channel tech support, including live chat.
- Don't keep customers waiting.
- Provide FAQs and troubleshooting help online (self service).
- Hire well and train representatives properly.

LO #1 Analyze client support issues

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Self-Check 5 Written Test

1.

- a. Customer feedback surveys
- b. Email and customer contact forms
- c. Usability tests
- d. Exploratory customer interviews
- e. Social media
- f. On-site activity (via analytics)
- g. Instant feedback from your website

LO #2 Provide advice on software, hardware or network			
Self-Check 1	Written Test		

- 1. A
- 2. D
- 3. B

LO #2 Provide advice on software, hardware or network		
Self-Check 2	Written Test	

- a. Date-When was the solution implemented? It is important to know the date because if problems occur after your changes, knowing the date of your fix makes it easier to determine whether your changes caused the problems.
- b. Why-Although it is obvious when a problem is fixed while it is done, a few weeks later, it might become less clear why that solution was needed. Documenting why the fix was made is important because if the same problem appears on another system, you can use this information to reduce time finding the solution.

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LO #2 Provide advice on software, hardware or network		
Self-Check 3	Written Test	

- 1. C
- 2. A

LO #2 Provide advice on software, hardware or network		
Self-Check 4	Written Test	

- 1. A
- 2. A
- 3. A

LO #2 Provide advice on software, hardware or network		
Self-Check 5	Written Test	

- a. Technical skill
- b. Active listening skill
- c. Professional act
- d. Following organizational rules and regulations
- e. Good conduct
- f. Following call handling processes
- g. Customer handling skill, etc

LO #3 Obtain client feedback	
Self-Check 1	Written Test

- 1. A
- 2.
- Make it easy to use.
- Determine the focus of the form
- Establish a clearly defined rating scale.

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LO #3 Obtain client feedback		
Self-Check 2	Written Test	

1.

- Provide all information you are required to place in. So that includes, but not limited to, your name, date of the feedback, job position and more.
- Always make sure to provide a statement regarding the purpose of the feedback.
- Remember to remain truthful when providing feedback to any person, product, service, or event.
- When providing additional comments, do so in a professional manner.

LO #3 Obtain client feedback	
Self-Check 3	Written Test

1.

- Publishing feedback form template.
- Collect & manage data
- Optimize your flow

LO #3 Obtain client feedback		
Self-Check 4	Written Test	

- It points out an actual pain point or problem.
- It would benefit others to implement this feedback.
- It's fairly long or detailed
- It may suggest one or two improvements, but not a complete change.
- It generally veers on the polite side.

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2.

- Review the feedback.
- Thank them and throw in a company promo.
- Consider sharing the feedback.
- Pass the service-qualified lead onto sales.
- Ask for referrals.

- Review the feedback carefully.
- Ask for reinforcements.
- Aggregate feedback.
- Craft an appropriate response.
- Consider their feedback.



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