Technical and Vocational Education and Training (TVET) Council

**Occupational Standards
of Competence**

Using Information Communication Technology

Level 2

#7, "Chelwood", 8th Avenue, Belleville, St. Michael, Barbados

Telephone: (246) 435-3096   Fax: (246) 429 2060   E-mail: office@tvetcouncil.com.bb.
           (246) 228-3383/84

U41802:   Make selective use of ICT

Unit Descriptor:

> This unit is suitable for you if your work involves the working out of how to use ICT for tasks (e.g. working out a monthly budget, creating a presentation with a sound track, editing a photo for a brochure or planning multiple web pages for a web site).
>
> **At the end of this unit you will be able to:**
>
> Work out how to use ICT effectively for complex tasks and purposes, taking account of your own skills and capabilities.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Make Selective Use of ICT	**Find and evaluate**
	1.1 Choose and use appropriate methods of searching for relevant information on the use of ICT.
	1.2 Review sources and information to help determine which ICT is most relevant.
	Organise
	1.3 Use a variety of ICT software tools and techniques to generate the intended results suitable for the tasks and audience needs.
	Review
	1.4 Evaluate own strengths and weaknesses in using ICT.
	1.5 Take into account the feedback from other people about own use of ICT.
	Explain (Use of ICT)
	1.6 Explain which software tools and techniques were chosen and how effectively they were used for particular tasks and uses.

RANGE STATEMENT

You must cover the items below:

No range is needed.

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Purposes

1.   Why and how using the ICT system and software is an appropriate way of carrying out the task.

Software tools and techniques

2.   How to generate results that communicate clearly and accurately with the audience as needed.

Terms for ICT

 3.   How to use terms correctly for hardware and software, such as "web-cam" and "netiquette".

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EVIDENCE GUIDE

For assessment purposes

(1)   Critical Aspects of Evidence

You will need to produce at least **four comprehensive tasks.** The evidence may come from activities in your workplace and/or from simulation.

Typical task size: Demonstrate skills and techniques from at least two (2) of the optional units you have chosen.

Your evidence must show that you have met **all** the performance criteria and underpinning knowledge and skills requirements.

(2)   Methods of Assessment

Internet and intranets
Typical task size: Download and organize information, web pages, pdf files etc. following a theme.

Observation by your assessor of you:

- Searching for information with a given theme and with a minimum amount of detail
- Evaluating the results and discard unwanted results
- Selecting and organizing bookmarked pages into themed groups
- Setting browser displays to cater for different needs such as high contrast or large print

E-mail
Typical task size: Approximately one (1) page of e-mail plus an attachment, plus some organization of recipients and folders.

Observation by your assessor of you:

- Searching for emails with common themes, recipients, senders etc., in current folders and archives
- Arranging emails into themed groups
- Arranging address book entries, create groups of recipients
- Organising multiple email accounts

Word Processing Software
Typical task size: Produce two (2) pages of work on an appropriate size paper.

Observation by your assessor of you:

- Using text search facility to locate information on a text document of about five (5) appropriate size pages
- Arranging information into a simple format in a WP document
- Organise files into a simple file structure

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Spreadsheet Software

Typical task size: Produce two (2) pages of work on an appropriate size paper.

Observation by your assessor of you:

- Searching for cells and groups of cells containing data of a particular type
- Entering data and presenting it in a suitable format
- Organising files into a simple file structure

Database Software

Typical task size: Data array covering two (2) page of work on an appropriate size paper.

Observation by your assessor of you:

- Searching for single criteria data
- Organising database queries into a logical sequence and correlate reports

Artwork & Imaging Software

Typical task size: Produce two (2) pages of work on an appropriate size paper including two (2) self-produced images and explanatory text.

Observation by your assessor of you:

- Using search facilities to locate suitable image files for a given task
- Evaluating for size and format
- Creating documents containing simple artwork and other images that are ordered and formatted correctly
- Organise files into a simple file structure

Website Software

Typical task size: Produce two (2) web pages of an appropriate size with simple navigation and image and some text.

Observation by your assessor of you:

- Using search facilities to locate suitable content for the web pages (i.e. information, simple images etc.)
- Creating two (2) linked web pages that function correctly and are simple to use and easy to read (e.g. appropriate font contrast etc.)

Presentation Software

Typical task size: A presentation of about ten (10) slides to include two (2) self-produced animations.

Observation by your assessor of you:

- Using search facilities to locate suitable content for the presentation (i.e. information, simple images, etc.)
- Creating a presentation so that the slides are in the correct order, animations function correctly, it can be controlled by the user and is easy to find.

Customised Software

Typical task size: Categorise software to nearest equivalent (WP, DB etc.) and use corresponding criteria.

Observation by your assessor of you:

- Categorising software to the nearest equivalent (WP, DB etc.) and using corresponding criteria.
- Organising files into a simple file structure.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation.

U41902:   **Operate a computer system**

Unit Descriptor:

> This unit is suitable for you if your work involves the setting up and use of a wide range of different types of hardware safely (e.g. lap top, mobile phone, external disc drive, digital camera, web cam or scanner), storage media (e.g. flash drive, CD-ROM, DVD, local area network (LAN or wide area network (WAN); and using software for complex tasks (e.g. keeping a project budget, editing a photo for a brochure).
>
> **At the end of this unit you will be able to:**
>
> Use most types of hardware, software and storage media effectively.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Operate a Computer System	**Set up**
	1.1 **Connect** most types of hardware and storage media safely.
	1.2 Link a computer to a network safely.
	Access
	1.3 **Access** files on a local area network (LAN) or a wide area network (WAN).
	Storage media
	1.4 Use common storage media.
	1.5 Identify the best way to transfer files to different types of **storage media.**
	1.6 Archive data to make the most of the storage space available.
	Tools and techniques
	1.7 Use common **software tools** and techniques appropriately.

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RANGE STATEMENT

You must cover the items below:

A. **Connect**:

      (i) commonly used peripherals to a stand-alone computer
      (ii) commonly used storage media
      (iii) a workstation to a network

B. **Access** files on**:**

      (i) commonly used storage devices
      (ii) a local area network (LAN)
      (iii) a wide area network (WAN)

C. **Storage media:**

      (i) hard drives
      (ii) optical disk
      (iii) USB memory
      (iv) flash memory

D. **Software tools:**

      (i) dialog boxes
      (ii) toolbars
      (iii) buttons
      (iv) icons
      (v) folders or directories

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Types of computer hardware

1.   What most tools and functions of software applications are used for.
2.   What storage media is available, such as hard disc, flash drive or CD ROMS.
3.   How to use most types of hardware and storage media.

Tools and functions

4.   What most tools and functions of software applications can be used for.
5.   How to select and use appropriate tools and functions for complex tasks.

Safety and health issues

6.   How to keep risks to people to a minimum
7.   How to keep risks to hardware to a minimum.

Security

8.   How to avoid security risks
9.   Why it is important to maintain security

Compatibility

10.   What problems can occur when hardware, software and operating systems are not compatible.
11.   Why compatibility standards are needed.

Data transmission speeds

12.   What general combinations of hardware and software offer very slow or fast transmission speeds.

Laws and guidelines

13.   What legislation (e.g. Computer Misuse Act, 2005 – 4) and guidelines affect the day-to-day use of ICT, such as data protection, equal opportunities, disability, safety and health, copyright and guidelines set by your employer or organisation.

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EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce **at least four (4) comprehensive tasks.**

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

Your performance evidence should show that you are able to perform **all** of the following:

A.   **Connect** safely:

(i)   commonly used peripherals to a stand-alone computer
(ii)   commonly used storage media
(iii)   a workstation to a network

B.   **Access files on:**

(i)   commonly used storage devices
(ii)   a local area network (LAN)
(iii)   a wide area network (WAN)

C.   **Storage media:**

(i)   hard drives
(ii)   optical disk
(iii)   USB memory
(iv)   flash memory

D.   **Software tools and techniques:**

(i)   menus
(ii)   dialog boxes
(iii)   toolbars
(iv)   buttons
(v)   icons
(vi)   folders or directories

(2)   Methods of Assessment

Observation by your assessor of you:

- Setting up the computer and making the basic connections safely.

- Using storage media

- Using tools and techniques while using software applications to produce ordinary routine documents

- Using features of the operating system

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation.

U24101:   **Maintain a safe and healthy ICT working environment**

Unit Descriptor:

> The basis of safety and health legislation is the Safety and Health at Work Act, 2005 – 12. The Act sets out the general duties that employers have towards employees and members of the public, and employees have to themselves and to each other.
>
> **At the end of this unit you will be able to:**
>
> Comply with relevant Safety & Health requirements and Policies in the workplace and check your own working practices and work area for any risk of you or others being harmed. Recognise the risk arising from any hazards you have identified and know which you can deal with safely yourself, and those you must report to the 'responsible person' for attention.
>
> Show you have taken steps to reduce those safety and health risks with which you might come into contact during the course of your work in accordance with instructions and workplace requirements.

ELEMENT	PERFORMANCE CRITERIA

To be competent you must achieve the following:

1. Maintain a safe and healthy ICT working environment

Safety and Health Regulations and Requirements

1.1   Comply with organisational Safety and Health regulations.

1.2   Name correctly and locate the persons responsible for safety and health in the workplace.

1.3   Carry out your working practices in accordance with legal requirements.

Safety and health risks

1.4   Identify those aspects of the workplace which present a health or safety risk and could harm yourself or other persons.

1.5   Report to the persons responsible for those hazards which present a high **risk** to safety and health in the workplace.

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1.6   Rectify those safety and health risks within your capability and the scope of your job responsibilities.

Safety and health workplace policies

1.7   Identify which workplace policies are relevant to your working practices.

1.8   Show that your personal conduct in the workplace does not endanger the safety and health of yourself or other persons.

1.9   Follow the **workplace policies** and suppliers' or manufacturers' instructions for the safe use of equipment, and materials.

1.10   Prepare **a personal Statement** on how a safe and healthy ICT work environment is maintained.

Safety & Health Regulations and requirements

1.11   Report any differences between workplace policies and suppliers' or manufacturers' instructions as appropriate.

1.12   Follow safety and health regulations and organizational procedures in the event of a fire or event requiring evacuation

Ergonomic principles

1.13   Practice ergonomic principles so as to avoid poor work habits which contribute to musculoskeletal disorders for many people who spend long hours seated at a computer.

RANGE STATEMENT

You must cover the items below:

A. Follow **regulations and requirements**

     i.   manufacturer
     ii.   organisation
     iii. legislation

B. Recognise **risks** resulting from:

     i.   the use and maintenance of machinery or equipment
     ii.   working practices which do not conform to laid down policies.
     iii.   unsafe behaviour
     iv.   accidental breakages and spillages
     v.   environmental factors

C. Follow **Workplace policies** covering:

     i.   the use of safe working methods and equipment
     ii.   the safe use of hazardous substances
     iii.   smoking, eating, drinking and drugs
     iv.   what to do in the event of an emergency
     v.   personal presentation

D. Avoid poor work habits:

     i.   wrists misaligned or excessive force used with a keyboard
     ii.   poor posture used with an incorrect seating height
     iii.   a monitor incorrectly positioned, resulting in eye strain and vision problems
     iv.   inappropriate lighting, causing glare on monitors and other work surfaces

UNDERPINNING KNOWLEDGE AND SKILLS

To ensure that your actions reduce risks to safety and health, you should know and understand the following aspects of safety and health legislation:

1.   Why it is important to comply with health and safety regulations

2.   Your legal duties for safety and health in the workplace as required by the Safety and Health at work Act, 2005-12.

3.   Your duties for safety and health as defined by any specific legislation covering your job role.

4.   What hazards may exist in your workplace and the difference between a hazard and a risk.

5.   The harmful effects of electricity.

6.   The improper use of equipment such as:

   •   Display screens

   •   Systems unit and its peripherals

7.   The particular safety and health risks which may be present in your own job role and the precautions you must take.

8.   The importance of remaining alert to the presence of hazards in the whole workplace.

9.   The importance of dealing with or promptly reporting risks.

10.   The requirements and guidance on the precautions.

11.   Agreed workplace procedures relating to controlling risks to safety and health.

12.   Responsibilities for safety and health in your job description.

13.   The responsible persons to whom to report safety and health matters.

14.   The importance of personal presentation in maintaining safety and health in the workplace.

15.   The importance of personal conduct in maintaining the safety and health of yourself and others.

16.   Workplace procedures for handling risks which you are unable to deal with.

EVIDENCE GUIDE

(1) Critical Aspects of Evidence

You will need to produce **at least two comprehensive tasks.** The evidence may come from activities in your workplace and/or from simulation.

1.   Performance evidence for this unit will be assessed while demonstrating competence in other units. The performance evidence selected .must be provided against each of the performance criteria of this unit and should be the primary source of evidence, but this will often be supported by questioning or other forms in order to gather evidence of your ability to perform competently across all the range items listed. This performance evidence must be provided from real working practice. In order to demonstrate competence you must be able to show consistent competent performance.

2.   The assessor must see performance evidence for each of the range items appropriate to your own workplace context. Performance evidence must show from the range that you have:

  o   Identified a minimum of **two** types of **risks** listed:

    i.   Manufacturers
    ii.   Organisation
    iii. Legislation

  o   Identify a minimum of **four workplace policies.**

3.   The assessor will need to be satisfied that you have the necessary knowledge and understanding to perform competently in respect of all the range items listed in this unit. Answers to questions and other forms of evidence may additionally be used to demonstrate an understanding of the essential knowledge required for the unit, and for the specific knowledge required.

4.   Your performance evidence should show that you are able to comply with regulations.

Your evidence must show that you have met all the performance criteria, range and underpinning knowledge requirements.

(2) Methods of Assessment

Typical task size:

Observation of you by your assessor:

1. Practicing health and safety when completing ICT tasks in the work place.

2. Complying with the following when completing ICT tasks in the work place:

i. Manufacturers guidelines
ii. Health and safety guidelines
iii. Organisation rules
iv. Legislation

Answers to written or oral questions from your assessor.

Personal statement on how you maintain a safe and healthy ICT working environment.

(3) Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation.

U42002:   **Produce documents using word processing software**

Unit Descriptor:

> This unit is suitable for you if your work involves using a wide range of software tools and techniques to produce professional looking documents (e.g., mail merged business letters and invoices, related reports and documents)
>
> **At the end of this unit you will be able to:**
>
> Use word processing software effectively to produce professional looking documents that communicate information clearly and accurately.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Use word processing software	**Create files**
	1.1 Use appropriate techniques to create, organize and save files.
	Combine information
	1.2 Link information using integrated software of the same or another type.
	Import
	1.3 Create documents with information **imported** from a different type of software.
	Export
	1.4 Create information to be **exported** to a file that can be used by different types of software.
	Edit text
	1.5 Use a wide range of **editing techniques** appropriately.
	Format text
	1.6 Use **tools** to format information in line with an organizational house style.

1.7   **Format** word processing documents to make them look professional, using a wide range of tools and techniques.

Layout

1.8   Use appropriate tools and techniques for creating, editing and formatting professional looking documents.

1.9   Select, change and use appropriate templates.

Check documents

1.10 Use electronic and manual proof- reading techniques to check spelling and grammar.

1.11 Check line spacing, paragraph and page breaks fall in appropriate places.

1.12 Check that appropriate formatting techniques are applied to headings and subheadings.

Improve efficiency

1.13 Enable short cut options.

1.14 Customise basic menus and toolbars.

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RANGE STATEMENT

You must cover the items below:

A.   **Imported** information**:**

       (i)   a spreadsheet graph into a word processing document
       (ii)   text into an image file
       (iii)   picture into a presentation file
       (iv)   information from a database onto a website
       (v)   mail merge

B.   **Exported** information:

       (i)   a spreadsheet graph into a word processing document
       (ii)   text into an image file
       (iii)   picture into a presentation file
       (iv)   information from a database onto a website
       (v)   mail merge

C.   **Editing techniques:**

       (i)   use appropriate font size
       (ii)   sort logically
       (iii)   insert special characters and symbols

D.   **Tools** to format information:

       (i)   tab options
       (ii)   column options
       (iii)   style options
       (iv)   page options (margins, sub-points orientation, headers and footers)
       (v)   table options

UNDERPINNING KNOWLEDGE AND SKILLS

you need to know and understand:

Produce information

1. How to produce information that communicates clearly and accurately with the audience.

Word processing documents

2. How to produce professional looking word processing documents well structured and appropriately styled for a wide variety of uses.

EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce at least **two (2) comprehensive tasks**.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

Your performance evidence should show that you are able to perform **all** of the following.

A.   **Import:**

      (i)   a spreadsheet graph to a word processing document
      (ii)   text to an image file
      (iii)   picture to a presentation file
      (iv)   information from a database onto a website
      (v)   mail merge

B.   **Export:**

      (i)   a spreadsheet graph to a word processing document
      (ii)   text to an image file
      (iii)   picture to a presentation file
      (iv)   information from a database onto a website
      (v)   mail merge

C.   **Editing techniques:**

      (i)   use appropriate font size
      (ii)   sort logically
      (iii)   insert special characters and symbols

D.   **Format**

      (i)   tab options
      (ii)   column options
      (iii)   style options
      (iv)   page options (margins, sub-points orientation, Headers and Footers)
      (v)   table options

(2)   **Methods of Assessment**

Typical task size: Produce two (2) page document on an appropriate size paper.

Observation by your assessor of you:

- Creating files and combining information
- Editing, and formatting
- Creating, editing and formatting tables
- Checking that text and layout make documents look professional
- Improving efficiency by using shortcuts

Products of work to show that you have used a word processor to:

- Create files
- combine information of different types
- Import information
- Export information
- Edit text
- Format text

Answers to written or oral questions from your assessor.

(3)   **Context of Assessment**

The evidence may come from activities in your workplace and/or from simulation.

U25201:   Use ICT to exchange information

Unit Descriptor:

This unit is suitable for you if your work involves the use of basic e-mail facilities, such as using address books to send e-mails to individuals; sending, receiving and opening attachments (e.g. digital pictures, word processing documents or spreadsheets); and using key words to search for information using a search engine.

At the end of this unit you will be able to:

Use basic facilities to e-mail software to send and receive messages and find information using browser software.

ELEMENT	PERFORMANCE CRITERIA

To be competent you must achieve the following:

1. Use ICT to exchange information

Send and receive

1.1   Use basic **send commands.**

1.2   Use basic **reply commands.**

1.3   Delete e-mail.

1.4   Send and open e-mails with attachments.

1.5   Save attachments to appropriate places.

1.6   Find e-mails.

1.7   Follow any rules and guidelines for sending and replying to e-mails.

Search

1.8   Use a search engine to find and select appropriate information.

1.9   Save the results of searches.

1.10   Use **suitable techniques** to make it easier to find useful information again.

1.11   Send and share information.

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RANGE STATEMENT

You must cover the items below:

A.   Use **send commands** to:

    (i)   e-mail individual message/s

    (ii)   reply by carbon copies

    (iii)   reply by blind carbon copies

B.   Use **reply commands** to:

    (i)   reply to individuals

    (ii)   reply to all

    (iii)   reply with history

C.   Use forward command to:

    (i)   forward e-mail

D.   Use **suitable techniques** to find information again and share it:

    (i)   bookmarks/favourites

    (ii)   saving of web pages

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

E-mail facilities

1. How to compose and receive E-mail messages.
2. The basic options for sending and replying.
3. How to send and receive attachments.
4. How to use an address book.

Problems and exchanging information

5.   Why some computer users may have difficulty in sending and receiving e-mails with attachments.
6.   What to do about e-mails from unknown users.
7.   What are viruses and what problems they can cause.
8.   How using anti-virus software can help to keep risks to a minimum.
9.   What risks there may be in downloading documents and software.
10. The risks of sharing information, such as personal details
11. Where and when to seek advice.

Laws and guidelines

12. What legislation (e.g. Computer Misuse Act, 2005 – 4) and guidelines affect day-to-day use of ICT, such as data protection, equal opportunities, disability, safety and health, copyright and guidelines set by your employer or organisations.

EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce **at least two tasks.** The evidence may come from activities in your workplace and/or from simulation.

Your performance evidence should show that you are able to:
1.
        i.   Send and receive e-mail messages while using all of the basic commands listed below:

   Send commands:
        ii.   send to individuals
        iii.   using carbon copies
        iv.   using blind carbon copies

   Reply commands:
        v.   reply to individuals
        vi   reply to all
        vii   reply with history

        viii   use a search engine to find and select appropriate information.

        ix.   use all of the following techniques to find and/or share information:

            a.   bookmarks
            b.   saving of web pages
            c.   sending of web pages and links

(2)   Methods of Assessment

Typical task size: One page of e-mail including an attachment on an appropriate size paper, plus some organisation of recipients.

Observation of you by your assessor:

- sending and receiving e-mails with attachments and without attachments
- using a search engine to find relevant information efficiently
- deleting e-mails
- exchanging information by using appropriate methods such as forwarding and replying to e-mails while following netiquette rules.

Work products, e.g., data presented in a suitable format to meet specifications

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation

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U42102:   **Use Internet and intranets**

Unit Descriptor:

> This unit is suitable for you if your work involves the Internet and intranet. It deals with understanding how to avoid Internet security risks using and customising browser features and searching for, finding and evaluating information.
>
> **At the end of this unit you will be able to:**
>
> Use computers and other hardware efficiently to access, retrieve and exchange relevant information of different types.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
	Search
1. Use Internet and intranets	1.1 Choose a search engine that is appropriate for the information that is needed.
	1.2 Carry out searches efficiently.
	Find and evaluate
	1.3 Choose and use appropriate methods of **searching** for relevant information**.**
	1.4 **Evaluate** sources and information to help choose what is most relevant.
	Sharing information
	1.5 Choose and use appropriate **methods** of sharing information.
	1.6 Use interactive sites to share information.
	Customise browser software
	1.7 **Customise** browser settings to improve the performance of software.

RANGE STATEMENT

You must cover the items below:

A.   Appropriate methods of **searching**:

(i)   search engines
(ii)   wild cards
(iii) boolean notation
- AND or
- NOT
- +
- -
- " "

B.   Evaluate:

(i)   credibility of source
(ii)   reliability of source

C.   Use **methods** of sharing information**:**

(i)   downloading files from FTP and HTTP sites
(ii)   sending and receiving web based mail
(iii) chat facilities and applications

D.   Customise settings to:

(i)   speed optimisation
(ii)   restrict loading of graph, audio and video

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Connection methods

1. What can affect your browsing experience.

2. What are the benefits and drawbacks of different connection methods.

Browser facilities

3. What methods can be used to exchange files and how to use them, such as file transfer protocol (FTP) and hypertext transfer protocol (HTTP)

4. What are the different browsers settings and how these can be changed.

5. Which browsers will allow e-mail to be sent and received.

6. How and when to delete temporary files.

7. How changing settings effects performance.

Information and other opportunities

8. What are meta search engines are and how to use them.

9. What opportunities are available to post material to websites

10. What opportunities are available to create websites.

11. How to search, find and evaluate information.

Internet security risks

12. What are the legal, ethical and economic risks.

13. What are the ways of protecting against risks, such as browser security settings, firewalls and anti-virus software.

Laws and guidelines

14. What and how different ICT activities such as storing names and addresses, downloading information from the Internet or sending inappropriate e-mails are affected by laws and guidelines.

EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce at least **two comprehensive tasks**.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

Your performance evidence should show that you are able to perform **all** of the following:

A.   Appropriate methods of **searching**:

     (iv) search engines
     (v)   wild cards
     (vi) boolean notation
- AND or
- NOT
- +
- -
- " "

B.   **Evaluate:**

     (iii) credibility of source
     (iv) reliability of source

C.   Use **methods** of sharing information**:**

     (iv) downloading files from FTP and HTTP sites
     (v)   sending and receiving web based mail
     (vi) chat facilities and applications

D.   **Customise** settings to:

     (iii) speed optimisation
     (iv) restrict loading of graph, audio and video

(2)   Methods of Assessment

Typical task size: Download and organise share information, web pages, etc., following a theme.

Observation by your assessor of you:

- Using Internet technology for the purpose of finding, evaluating and sharing information
- Demonstrating knowledge of issues affecting the use of the technology, such as security, legislation and software features.
- Searching for information with a given theme with a minimum amount of detail; evaluating the results and discarding unwanted results.

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■

Answers to written or oral questions from your assessor.

(3) Context of Assessment

Your evidence must be the result of real work activities and/or simulation undertaken by yourself.

U42202:   **Troubleshoot ICT problems (for users)**

Unit Descriptor:

> This unit is suitable for you if your work involves the use of skills and experience to identify most types of errors (e.g. faulty cable connections, broken mouse, or damage to software from viruses) and use of basic recovery techniques in accordance with organisational policies; and knowing about problems to do with compatibility.
>
> **At the end of this unit you will be able to:**
>
> Solve errors on some types of hardware and software, using your skills and experience.

ELEMENT	PERFORMANCE CRITERIA

To be competent you must achieve the following:

1. Troubleshoot ICT problems (For users)

Reset

1.1 Reset hardware using your skills and experience or using **tools** supplied by the manufacturer.

Recover

1.2 Recover software using your skills and experience using **tools** supplied by the manufacturer.

Correct Errors

1.3 Choose and use **methods** that have worked in the past to correct different types of **errors.**

1.4 Use help desk information to correct **errors.**

1.5 Check **errors** that have been corrected.

1.6 Report errors and refer them to the appropriate person.

RANGE STATEMENT

You must cover the items below:

A.   Use **tools**:

    (i)   reset some hardware

    (ii) recover software

B.   **Methods** to correct errors:

    (i)   actions to be taken from on-screen error messages

    (ii) methods that have worked in the past to correct different types of errors.

    (iii) help menus or manufacturers' guidelines.

    (iv) instructions from technical support

    (v) help desk facilities

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Errors

1.   What **errors** and problems can be corrected from experience, to do with:

- Hardware
- Storage medias
- Software
- Combinations of hardware and software
- Data
- Viruses

Advice

2.   When there is a problem or error.

3.   Where and how to find advice on hardware and software errors.

Compatibility

4.   What problems can occur when hardware and software, including operating systems, are not compatible.

5.   What compatibility standards are needed.

6.   Why compatibility issues may occur.

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EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce **at least two comprehensive tasks.**

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   Use tools:

     (i)   reset hardware

     (ii)   recover software

B.   Methods to correct errors:

     (i)   actions to be taken from on-screen error messages

     (ii)   methods that have worked in the past to correct different types of errors.

     (iii)   help menus or manufacturers' guidelines.

     (iv)   instructions from technical support

     (v)   help desk facilities

(2)   Methods of Assessment

Observation by your assessor of you:

- Resetting hardware and recovering software
- Correcting errors by using appropriate methods.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation.

U42302:	**Maintain ICT (for users)**

Unit Descriptor:

> You are likely to be in a role which involves you carrying out maintenance safely (e.g. using 'defrag' to improve the performance of the hard disc); and knowing what is involved in upgrading hardware and software.
>
> **At the end of this unit you will be able to:**
>
> Carry out appropriate routine and non-routine maintenance safely, so that hardware and software are kept in a good condition and up to date.

ELEMENT	**PERFORMANCE CRITERIA**

To be competent you must achieve the following:

1. Maintain ICT(for users)

Manage files

1.1   Change default settings for saving data.

Clean

1.2   Select suitable cleaning methods and materials.

1.3   Clean **hardware** to keep them working at optimum levels.

1.4   Clean hardware in keeping with manufacturers' guidelines.

Avoid safety and health risks

1.5   **Carry out a risk assessment** of own use of ICT.

Maintain

1.6   Carry out routine maintenance to hardware, following manufacturers' instructions for users.

1.7   Identify and carry out any non-routine maintenance required to hardware by following manufacturers' guidelines.

RANGE STATEMENT

You must cover the items below:

A.   **Hardware**

      (i)   keyboard
      (ii)   mouse
      (iii)   vents
      (iv)   monitor
      (v)   other peripherals

B.   Carry out **risk** assessment:

      (i)   faulty power supplies
      (ii)   overloading of power supplies
      (iii)   lack of use of surge protector
      (iv)   obtrusive placement of cables and power cords

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Maintenance

1.   What routine maintenance may be needed.

2.   What service maintenance professionals need to provide.

Safety and health issues

3.   What are the ways to keep risks to people to a minimum.

4.   What are the ways to keep risks to hardware to a minimum.

Upgrade hardware and software

5.   What are the benefits of upgrading hardware and software.

6.   What are the drawbacks of not upgrading hardware and software.

7.   How to check compatibility of software and hardware upgrades.

For assessment purposes

(1)   Critical Aspects of Evidence

You will need to produce at least **two (2) comprehensive** tasks for your assessor to judge and decide whether you have met the requirements of this unit.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

Your performance evidence should show that you are able to perform **all** of the following:

A.   **Hardware**

    (i)   keyboard
    (ii)   mouse
    (iii)   vents
    (iv)   monitor
    (v)   other peripherals

B.   Carry out **risk** assessment:

    (i)   faulty power supplies
    (ii)   overloading of power supplies
    (iii)   lack of use of surge protector
    (iv)   obtrusive placement of cables and power cords

(2)   Methods of Assessment

Observation by your assessor of you:

Completing a maintenance task that would involve actions that users can take on a system in order to prevent or slow down deterioration of various functions. It does not mean the ability to strip down and repair all or part of the system, which is a job for the ICT System Support practitioners.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence must be the result of real work activities undertaken by yourself in your workplace or by simulation.

U42402:   **Evaluate the impact of ICT**

Unit Descriptor:

> This unit is suitable for you if your work involves the analysis of other people's use of ICT (e.g. working out what help to obtain for someone in using ICT).
>
> **At the end of this unit you will be able to:**
>
> Analyse information and draw fair conclusions about the benefits and drawbacks of using ICT.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Analyse and evaluate the impact of ICT	1.1 Gather **information** to help make judgments.
	1.2 Analyse information about how ICT is used.
	1.3 Evaluate the advantages and disadvantages of using ICT.
	1.4 Comment on the impact of the use of ICT.
2. Develop ICT knowledge and skills	2.1 Identify users' learning needs in using ICT in consultation with others.
	2.2 Use appropriate sources of information to find out about developments in using ICT.
	2.3 Source and recommend opportunities for learning ICT skills.
	2.4 Advise about the most suitable ways of learning.

RANGE STATEMENT

You must cover the items below:

A.   Gather **information:**

        (i)   how ICT is used
        (ii)   developments in using ICT
        (iii)   advantage and disadvantage of using ICT
        (iv)   opportunities for learning ICT skills
        (v)   impact of ICT

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Individuals and organisations

1. Why what people do is changing because of using ICT.

2. What benefits there may be in gathering and organizing business information using ICT, such as storing and maintaining customer details or keeping sales records.

3. How using on-line services, such as banking, mailing lists and shopping is changing people's access to information.

4. Where and how to find information about changes and developments to ICT hardware and software.

Improve access

5. What difficulties some people may have in using ICT, (i.e., due to a disability).

6. What some people may have in accessing documents that have been produced using ICT, (i.e., persons with impaired sight).

7. Where to get advice about software or equipment that can help people use ICT, (i.e., persons with impaired sight).

8. Health and safety issues

9. What are the ways to keep risks to people to a minimum.

10. What are the ways to keep risks to hardware to a minimum.

Security risks

11. What are the risks of down-loading software from the internet.

Improving learning

12. What are the benefits and draw-backs of web-based learning or e-learning compared with other methods of learning.

EVIDENCE GUIDE

For assessment purposes:

(1)   **Critical Aspects of Evidence**

You will need to produce **at least two comprehensive tasks.**

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

Your performance evidence should show that you are able to gather information from various sources:

A.   Gather **information** on:

         (i)   how ICT is used
         (ii)   developments in using ICT
         (iii)   advantage and disadvantage of using ICT
         (iv)   opportunities for learning ICT skills
         (v)   impact of ICT

(2)   **Methods of Assessment**

Observation by your assessor of you:

- Collecting information from a colleague, other sources, about the most appropriate learning opportunities to meet any ICT skills gaps identified

- Analysing and evaluating the impact of ICT use

- Planning and learning ICT skills

Work products which resulted from an evaluation and an analysis of the impact of the use of ICT.

Answers to written or oral questions from your assessor.

(3)   **Context of Assessment**

The evidence may come from activities in your workplace and/or from simulation.

U42502:   **Use ICT systems**

Unit Descriptor:	This unit is suitable for you if your work involves the setting up and use of different types of hardware, software and communication technologies safely: e.g. lap top, mobile phone, external disc drive, digital camera, web cam or scanner; also flash drive, CD-ROM, DVD, local area network (LAN) or wide area network (WAN).

At the end of this unit you will be able to:

Use different types of hardware, software and communication technologies effectively.

ELEMENT   PERFORMANCE CRITERIA

To be competent you must achieve the following:

1. Set up hardware and access network

   1.1   **Connect** a computer to **other hardware** safely.

   1.2   Link a computer to **networks** safely.

   1.3   Access files on a local area network (LAN) and a wide area network (WAN) and commonly used storage devices

2. Protect software and data

   2.1   Set **password levels** on software and data.

   2.2   Make backups of data, where necessary.

   2.3   Download software patches using **tools and techniques.**

   2.4   Take appropriate action to **keep risks to a minimum,** when downloading software.

   2.5   Take action to avoid risks when opening emails attachments.

RANGE STATEMENT

You must cover the items below:

A.   **Connect** safely:

(i)   commonly used peripherals
(ii)   commonly used storage media to a computer

B.   **Other hardware:**

(i)   hard drives
(ii)   optical disks
(iii)   USB storage devices
(iv)   laptop
(v)   mobile phone
(vi)   digital camera
(vii)   web cam
(viii)   scanner

C.   **Networks:**

(i)   LAN
(ii)   WAN

D.   Set **password levels:**

(i)   low
(ii)   medium
(iii)   high

E.   use **tools and techniques** appropriately:

(i)   menus
(ii)   dialog boxes
(iii)   toolbars
(iv)   buttons
(v)   icons
(vi)   folders or directories
(vii)   protection software

F.   Take appropriate actions to **keep risk to a minimum**

(i)   update anti-virus software
(ii)   identify source of e-mails prior to opening
(iii)   control the downloads of files
(iv)   authenticate the site
(v)   use of firewalls

You need to know and understand:

Types of computer hardware

1. What are the different types of computer hardware
2. What storage media is available, (i.e., hard disc, optical disks and USB storage devices).
3. How to use most types of hardware and storage media.

Errors

4. What errors and problems can be corrected, regarding hardware, software, hardware and software compatibility issues and viruses.

ICT safety and health issues

5. What are the ways to keep risks to people to a minimum.
6. What are the ways to keep risks to hardware to a minimum.

ICT security risks

7. What are the risks when downloading software from the Internet.
8. What are the risks from unauthorised access to your computer system.
9. What are the risks to your computer or operating system.

Advice

10. Where and how to find advice on common errors with hardware and software.

EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce **at least two comprehensive tasks** for your assessor to judge and decide whether you have met the requirements of this unit.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   Connect safely:

(i)   commonly used peripherals
(ii)   commonly used storage media to a computer

B.   Other hardware:

(i)   hard drives
(ii)   optical disks
(iii)   USB storage devices
(iv)   laptop
(v)   mobile phone
(vi)   digital camera
(vii)   web cam
(viii)   scanner

C.   Networks:

(i)   LAN
(ii)   WAN

D.   Set password levels:

(i)   low
(ii)   medium
(iii)   high

E.   use tools and techniques appropriately:

(i)   menus
(ii)   dialog boxes
(iii)   toolbars
(iv)   buttons
(v)   icons
(vi)   folders or directories
(vii)   protection software

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F.   Take appropriate actions to **keep risk to a minimum**

          (i)   update anti-virus software
          (ii)   identify source of e-mails prior to opening
          (iii)   control the downloads of files
          (iv)   authenticate the site
          (v)   use of firewalls

(2)   Methods of Assessment

Observation by your assessor of you:

- Setting up different types of hardware safely.

- Accessing data from networks.

- Protecting software and data in different ways.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation.

| **U42702:** | **ICT security (for users)** |

Unit Descriptor:	This unit is suitable for you if your work involves how to use equipment safely and securely to avoid, common security risk and day-to-day security threats. It should also involve your ability to display that you have a knowledge and understanding of the laws and guidelines that affect the use of ICT including the use of different methods to protect and control access to software and data.
	At the end of this unit you will be able to:
	Select and use appropriate methods to keep common security risks to a minimum

ELEMENT	**PERFORMANCE CRITERIA**
	To be competent you must achieve the following:
1. Protect software and data	1.1 Use identity (ID) and password to access computer systems.
	1.2 Set **password levels** on software and data.
	1.3 Secure data and software.
	1.4 Make **back up** of application data and operating system files following recommended guidelines.
	1.5 Use anti-virus software to protect applications.
	1.6 Download software patches to fix security flaws.
	1.7 Take **appropriate action to keep risks to a minimum,** when downloading software.
	1.8 Take action to avoid risks from receiving and opening attachments from e-mails.

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RANGE STATEMENT

You must cover the items below:

A.   Set **password levels**

   (i)   low
   (ii)   medium
   (iii)   high

B.   Make **Back-up:**

   (i)   optical disk
   (ii)   removable hard drive
   (iii)   USB storage devices
   (iv)   server

C.   Take **appropriate actions to keep risk to a minimum**

   (i)   update anti-virus software
   (ii)   identify source of e-mails prior to opening
   (iii)   control the downloads of files

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UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Security risks

1. What are the risks to data from people, (i.e., theft, viruses or gaining unauthorised access).

2. What are the risks to data from the hardware or software (i.e., faults, errors or loss).

3. What are the risks of receiving and opening attachments from e-mails.

4. What are the risks of downloading software from the Internet.

Control access

5. Why it is important to control access.

6. What are the ways to control access to common hardware and storage media.

7. What are the ways to control other people from editing data and accessing common hardware.

8. Ways to control access to common software.

Laws and guidelines

9. What laws and guidelines affect day-to-day use of ICT, such as data protection, equal opportunities, disability, safety and health, copyright and guidelines set by your employer or organisation.

10. What and how different ICT activities are affected by laws and guidelines, (i.e., storing names and addresses, downloading images from the internet or sending inappropriate e-mails).

EVIDENCE GUIDE

For assessment purposes:

(1) Critical Aspects of Evidence

You will need to produce at least **two comprehensive tasks**.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   Set **password levels**

    (i)   low
    (ii)   medium
    (iii)   high

B.   Make **Back-up:**

    (i)   optical disk
    (ii)   removable hard drive
    (iii)   USB storage devices
    (iv)   server

C.   Take **appropriate actions to keep risk to a minimum**

    (i)   update anti-virus software
    (ii)   identify source of e-mails prior to opening
    (iii)   control the downloads of files

(2)   Methods of Assessment

Observation by your assessor of you:

- Protecting software and personal data in different ways.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence must be the result of real work activities/and or simulation.

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U42702:   **Use spreadsheet software**

Unit Descriptor:

This unit is suitable for you if your work involves the use of formulae and functions (e.g. mathematical, statistical and financial) and tools to produce information (e.g. monthly expenditure and sales figures, cash flow forecasts and graphs of results).

At the end of this unit you will be able to:

Use spreadsheet software effectively.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Use Spreadsheet Software	**Create files**
	1.1 Use appropriate techniques to create and organise spreadsheets.
	Combine information
	1.2 Link information using integrated software of the same or another type.
	Import
	1.3 Create documents with information **imported** from a different type of software.
	Export
	1.4 Create information to be **exported** to a file that can be used by different types of software.
	Enter and edit spreadsheet data
	1.5 Insert data into spreadsheet.
	1.6 Enter/key data into cells.
	1.7 Use a wide range of **editing techniques** appropriately in spreadsheets.

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Format spreadsheets

1.8   Format spreadsheets using a range of appropriate **tools and techniques.**

Check spreadsheets

1.9   Check that page breaks fall in appropriate places.

1.10   Check that formatting is appropriate.

1.11   Check the accuracy of results and correct errors in formulas.

Functions and formulas

1.12   Use **appropriate functions and formulas** in spreadsheets.

Analyse and interpret (spreadsheets)

1.13   Use appropriate tools and **techniques for analyzing** data.

Present (spreadsheets)

1.14   Use appropriate **methods to present data.**

Improve efficiency

1.15   Enable short cut options.

1.16   Customise basic menus and toolbars.

1.17   Create and use macros.

RANGE STATEMENT

You must cover the items below:

A.   Import

   (i)   a spreadsheet graph into a word processing document
   (ii)   text into an image file
   (iii)   picture into a presentation file
   (iv)   simple information from a database onto a website

B.   Export

   (i)   a spreadsheet graph into a word processing document
   (ii)   text into an image file
   (iii)   picture into a presentation file
   (iv)   simple information from a database onto a website

C.   Editing techniques in spreadsheets:

   (i)   use absolute and relative cell references
   (ii)   add data and text into a chart
   (iii)   change type of chart
   (iv)   add data labels.

D.   Format complex spreadsheets using tools and techniques for:

   (i)   cells
   (ii)   charts
   (iii)   spreadsheets

E.   Appropriate functions and formulas: (Three of the functions and formulas)

   (i)   mathematical
   (ii)   statistical
   (iii)   financial
   (iv)   relational

F.   Techniques for analyzing:

   (i)   filter
   (ii)   sort
   (iii)   charts

G.   Methods to present data:

   (i)   range of graphs provided by the software
   (ii)   range of charts provided by the software

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UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Produce information

1.   How to produce information which communicates clearly and accurately with the audience.

Spreadsheets

2.   How to produce spreadsheets for a wide variety of use. Spreadsheet will have structure which is familiar or often used.

Analyse and interpret

3.   What methods are suitable for analysing and interpreting data.

EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce at least **two comprehensive tasks**.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   Import

    (i)   a spreadsheet graph into a word processing document
    (ii)   text into an image file
    (iii)   picture into a presentation file
    (iv)   simple information from a database onto a website

B.   Export

    (i)   a spreadsheet graph into a word processing document
    (ii)   text into an image file
    (iii)   picture into a presentation file
    (iv)   simple information from a database onto a website

C.   Editing techniques in spreadsheets:

    (i)   use absolute and relative cell references
    (ii)   add data and text into a chart
    (iii)   change type of chart

D.   Format complex spreadsheets using tools and techniques for:

    (i)   cells
    (ii)   charts
    (iii)   spreadsheets
    (iv)   add data labels

E.   Appropriate functions and formulas: (Three of the functions and formulas)

    (i)   mathematical
    (ii)   statistical
    (iii)   financial
    (iv)   relational

F.   Techniques for analysing:

    (i)   filter
    (ii)   sort
    (iii)   charts

G.   **Methods to present complex data:**

    (i)   Range of graphs provided by the software
    (ii)   Range of charts provided by the software

(2)   Methods of Assessment

Typical task size: Five (5) appropriate size pages of data.

Observation by your assessor of you:

- Creating files and combining information (e.g. adding a spreadsheet graph into a word processing document)
- Entering and editing spreadsheet data
- Formatting and checking spreadsheets using a range of tools
- Searching for cells and groups of cells containing data of a particular type or within a given range
- Using functions and formulas
- Analysing and interpreting
- Improving efficiency using short cuts

Work products to show data presented in a suitable format to meet specifications.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

The evidence may come from activities in your workplace and/or from simulation.

U42802:   Use database software

Unit Descriptor:

> This unit is suitable for you if your work involves modification of single table, non-relational databases, creating queries using multiple selection criteria, and reports (e.g. about sales activities order details or project management).
>
> **At the end of this unit you will be able to:**
>
> Enter and retrieve a range of information and create and modify database fields.

ELEMENT	PERFORMANCE CRITERIA

To be competent you must achieve the following:

Enter data

1. Use Database Software

1.1   Create fields for entering data with the required **field characteristics**.

1.2   Create forms for data entry.

Modify databases

1.3   Modify field characteristics within a **database** while maintaining the integrity of existing data.

Format data

1.4   Use appropriate tools and techniques to **format data** that is text and numbers.

1.5   **Format reports** from databases using appropriate tools and techniques for page layout.

Check data

1.6   Use **automated facilities** for checking data and reports.

1.7 Check that reports are formatted and laid out appropriately.

Database queries

1.8 Create and use multiple criteria queries to extract data for reports.

Database reports

1.9 Plan and **produce reports** from databases.

Improve efficiency

1.10 Enable shortcut options.

1.11 Create and use macros.

RANGE STATEMENT

You must cover the items below:

A.   Enter data with **field characteristics:**

    (i)   name
    (ii)   type
    (iii)   size
    (iv)   format

B.   Modify **databases'** field characteristics:

    (i)   name
    (ii)   type
    (iii)   size
    (iv)   format

C.   **Format data reports**:

    (i)   page size
    (ii)   page orientation
    (iii)   page numbering
    (iv)   headers and footers
    (v)   margins
    (vi)   alignment

D.   **Automated facilities** for:

    (i)   checking spelling and grammar
    (ii)   sorting data

E.   **Produce reports** by using:

    (i)   automated facilities
    (ii)   database queries

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Database design

1. What types of design content are stored within the database, based on the field characteristic and table names.

2. How data is structured in a simple database (i.e., single-table, non-relational).

Field characteristics

3. What characteristics a database field may have, (i.e., data type, field name, field size and field format).

4. How field characteristics can contribute to data validation.

Data integrity

5. Why it is important to maintain data integrity.

6. What methods should be used to maintain data integrity in a simple database -(i.e., single-table, non-relational).

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce at least **two comprehensive tasks**.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

Typical task size: Two (2) reports generated from the database.

A.   Enter data with **field characteristics:**

(i)   name
(ii)   type
(iii)   size
(iv)   format

B.   Modify **database**:

(i)   name
(ii)   type
(iii)   size
(iv)   format

C.   **Format data reports**:

(i)   page size
(ii)   page orientation
(iii)   page numbering
(iv)   headers and footers
(v)   margins
(vi)   alignment

D.   **Automated facilities** for:

(i)   checking spelling and grammar
(ii)   sorting data

E.   **Produce reports** by using:

(i)   automated facilities
(ii)   database queries

(2)   Methods of Assessment

Observation by your assessor of you:

- Entering data into a database.
- Creating fields in a database.
- Modifying databases by changing field characteristics.
- Formatting – data and reports.
- Planning and producing database reports – based on multiple criteria database queries
- Checking data in databases
- Improving efficiency – utilising short cuts.

Work products to show: A non-relational database.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

The evidence may come from activities in your workplace and/or from simulation.

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U42902:   **Use customised or specialist software**

Unit Descriptor:

> This unit is suitable for you if your work involves the selection and use of suitable specialist or bespoke software applications to carry out a work related task.
>
> **At the end of this unit you will be able to:**
>
> Use customised/specialist software effectively for complex tasks.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
1. Use Customised or Specialist software	**Handle files**
	1.1 Use appropriate **file handling techniques,** to organise and save files.
	Combine information
	1.2 Use appropriate techniques to **combine information.**
	1.3 Add information from one type of software to information produced using different software.
	Enter, edit, format and process information
	1.4 Carry out complex tasks using appropriate **tools and techniques** for entering, editing, formatting and processing information.
	Check information
	1.5 Use appropriate techniques to **check complex information.**

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RANGE STATEMENT

You must cover the items below:

A.   File handling techniques:

     (i)   create
     (ii)   open
     (iii)   save/save as
     (iv)   change file format
     (v)   print

B.   **Combine information**

     (i)   insert text and graphics
     (ii)   resize graphics text and or graphics
     (iii)   control placement of text and or graphics

C.   Use tools and techniques for:

     (i)   entering data
     (ii)   inserting text and or graphics
     (iii)   deleting text and or graphics
     (iv)   cutting and pasting
     (v)   copying and pasting
     (vi)   dragging and dropping
     (vii)   finding and replacing
     (viii)   formatting techniques for text and, or graphics
     (ix)   generating result (s)

D.   Use tools and techniques to check complex information

     (i)   accuracy of text and numerical data
     (ii)   labeling, sizing and placement of images, charts and diagrams

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Purpose

1. Why the use of customised/specialist software is an appropriate way of carrying out the task.

2. How the use of the software is an appropriate way of carrying out the task.

Tools and functions

3. What most tools and functions of the customised/specialist software application can be used for.

4. How to select and use appropriate tools and functions for a variety of tasks.

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For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce **at least two comprehensive tasks** for your assessor to judge and decide whether you have met the requirements of this unit.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   File handling techniques:

> (i)   create
> (ii)   open
> (iii)   save/save as
> (iv)   change file format
> (v)   print

B.   **Combine information**

> (i)   insert text and graphics
> (ii)   resize graphics text and or graphics
> (iii)   control placement of text and or graphics

C.   Use tools and techniques for:

> (i)   entering data
> (ii)   inserting text and or graphics
> (iii)   deleting text and or graphics
> (iv)   cutting and pasting
> (v)   copying and pasting
> (vi)   dragging and dropping
> (vii)   finding and replacing
> (viii)   formatting techniques for text and, or graphics
> (ix)   generating result (s)

D.   Use techniques to Check complex information

> (i)   accuracy of text and numerical data
> (ii)   labeling, sizing and placement of images, charts and diagrams

(2)   Methods of Assessment

Typical task size: Categorize software to nearest equivalent (WP, DB etc.) and use corresponding criteria to carry out an appropriate work related task.

Observation by your assessor of how you:

- Use file handling techniques for the software (e.g. create, open, save/save as and print) appropriately.

- Use techniques to combine information (e.g. insert text, insert graphics; resize graphics, and position).

- Use appropriate basic techniques for entering, formatting, editing and processing information when carrying out tasks (e.g. entering data, inserting, deleting, cutting and pasting, copying and pasting, dragging and dropping; finding and replacing and generating a result(s).

- Use appropriate techniques to check information (e.g. the accuracy of text; numerical data; and the labeling and sizing and placement of images, charts and diagrams).

Answers to written or oral questions from your assessor

(3)   Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation.

U43002:   Use website software

Unit Descriptor:

This unit is suitable for you if your work involves the production of multiple-page websites (e.g. detailed information about an organisation and what they do or the products or services offered by a company).

At the end of this unit you will be able to:

Use software effectively to produce multiple-page web sites that communicate clearly and accurately.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
	Create files
1. Use Website Software	1.1 Use appropriate techniques to create, organize and save files.
	Plan and produce websites
	1.2 Choose what content and features will be included in websites.
	1.3 Plan the layout of the content and how any features will be used.
	1.4 Use appropriate **web tools and techniques** to create a **website.**
	Edit, format and layout content
	1.5 Use a wide range of editing and formatting **tools and techniques** to produce content for websites.
	Check layout issues
	1.6 Use proof reading techniques to check for spelling and grammatical accuracy

Check and upload content

1.7   Check that line and paragraphs fall in appropriate places, and headings, sub-headings and other formatting techniques are used appropriately.

1.8   Check that colour settings and filters are used appropriately.

1.9   Check that image resolution is suitable for where and how it will be used.

Upload and publish a website

1.10 Use a file exchange programme to **upload** and **publish** a website.

Publish website

1.11 Publish finished website.

RANGE STATEMENT

You must cover the items below:

A.   Use **Web tools and techniques** for:

(i)   creating links to bookmark text within a page
(ii)   linking web pages together within a website and adding a hyperlink to someone else's website
(iii)   altering simple code using programming language
(iv)   importing different file formats into web pages:
- Application files
- PDF
- Image files
- Video

B.   Produce content for website using **tools and techniques:**

(i)   format characters, lines, paragraphs and pages
(ii)   insert and change text
(iii)   resize, align, rotate, flip and arrange images
(iv)   using tables to lay out a web page
(v)   character, line spacing, paragraphs and pages, and colour, fonts, size background and pictures
(vi)   style sheet

C.   **Upload and publish** using file exchange programme:

(i)   FTP
(ii)   HTTP(S)
(iii)   SFTP

D.   Create web site pages with:

(i)   filters
(ii)   pop ups
(iii)   active X Controls

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Produce information

1. How to produce information that communicates clearly and accurately.

Website features

2. How information is set out on different web pages and websites, (i.e., contact details, employees, interests, services or products).

3. How web pages and websites are structured, using hyperlinks and pop-ups.

4. How to use filters to control the content of web pages (pop-ups, active X controls).

5. What are the different types of design elements, (i.e., using colour for the page background, the text, hyperlinks and visited hyperlinks).

6. What multimedia features (i.e., sound, animation or live video).

7. What interactive features (i.e., such as message boards, forms, e-mail links and registration logins.

8. What are the benefits and drawbacks of different features for the user.

Laws and guidelines

9. What and how different ICT activities are affected by laws and guidelines, (i.e., storing names and addresses, downloading information from the internet or publishing inappropriate material).

User issues

10. What difficulties users with different needs may have in accessing websites.

11. Why download speed vary, (i.e., the type of browser and connection and by the memory size of the contents of the web page.

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EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce at least **two comprehensive tasks**.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   Use **Web tools and techniques for:**

(i)   creating links to bookmark text within a page
(ii)   linking web pages together within a website and adding a hyperlink to someone else's website
(iii)   altering simple code using programming language
(iv)   importing different file formats into web pages:
   • application files
   • PDF
   • image files
   • video

B.   Produce content for website using **tools and techniques:**

(i)   format characters, lines, paragraphs and pages
(ii)   insert and change text
(iii)   resize, align, rotate, flip and arrange images
(iv)   using tables to lay out a web page
(v)   character, line spacing, paragraphs and pages, and colour, fonts, size background and pictures
(vi)   style sheet

C.   **Upload and publish** using file exchange programme:

(i)   FTP
(ii)   HTTP(S)
(iii)   SFTP

D.   Create web site pages with:

(i)   filters
(ii)   pop ups
(iii)   active X Controls

(2)   **Methods of Assessment**

Observation by your assessor of you:

- Demonstrating your ability to produce a multi-page website for a specific, useful purpose.
- Uploading website
- Publishing a finished website

Answers to written or oral questions from your assessor.

(3)   **Context of Assessment**

The evidence may come from activities in your workplace and/or from simulation.

U43102:   **Use artwork and imaging software**

Unit Descriptor:

This unit is suitable for you if your work involves the creation of complex artwork and images (e.g. work flow process maps, drafted images, edited photos or logos).

At the end of this unit you will be able to:

Use software effectively to produce complex artwork and images.

ELEMENT	PERFORMANCE CRITERIA
1. Use Artwork and Imaging Software	*To be competent you must achieve the following:*

Manage files

1.1   Use appropriate techniques to manage, organise and save files.

Create artwork and images

1.2   Choose and use the most suitable software **tools and techniques** for creating and manipulating artwork and images.

1.3   Take account of the following when creating artwork and images: page or colour quality; resolution; canvas size; colour mode; file size and format.

Insert, manipulate and edit artwork and images

1.4   Use **tools and techniques** appropriately to insert and edit artwork and images.

Check artwork and images

1.5   Check that colour controls are used appropriately.

1.6   Check that image resolution is appropriate.

Check Layout

1.7   Check that the layout looks professional.

1.8   Check that **formatting techniques** are used appropriately.

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RANGE STATEMENT

You must cover the items below:

A.   Use **tools and techniques** for:

(i)   grouping
(ii)   ungrouping
(iii)   filters to create special effects

B.   Use **formatting techniques** for:

(i)   alignment
(ii)   line spacing
(iii)   paragraph spacing

UNDERPINNING KNOWLEDGE AND SKILLS

You need to know and understand:

Produce information

1.   How to produce artwork and images that communicate clearly and accurately with the reader.

Artwork and images

2.   How to produce complex artwork and images for a wide variety of uses.

File formats

3.   What file formats are suitable for websites (e.g., jpeg and gif).

4.   What file formats are suitable for print publishing that are application specific and more common (e.g. psd, eps, rtf or html).

Laws and guidelines

5.   What and how different ICT activities are affected by industry/organizational laws and guidelines, (i.e., storing names and addresses, downloading mages from the internet or sending inappropriate emails).

EVIDENCE GUIDE

For assessment purposes:

(1)   Critical Aspects of Evidence

You will need to produce **two tasks that comprehensively demonstrate** that you have met all the performance criteria, range and underpinning knowledge requirements.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   Use **tools and techniques** for:

(i)   grouping
(ii)   ungrouping
(iii)   filters to create special effects

B.   Use **formatting techniques** for:

(i)   alignment
(ii)   line spacing
(iii)   paragraph spacing

(2)   Methods of Assessment

Observation by your assessor of you:

Work products to show data presented in a suitable format to meet specifications.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

Your evidence may come from activities in your workplace and/or from simulation.

U43202:   Use presentation software

Unit Descriptor:

> You are likely to be in a role which involves the use of software applications to produce presentations, which include a combination of media (e.g. photos from digital cameras, animation and sound) for education, entertainment or information sharing.
>
> **At the end of this unit you will be able to:**
>
> Use presentation software effectively to produce clear and accurate presentations.

ELEMENT	PERFORMANCE CRITERIA
	To be competent you must achieve the following:
	Save files
1. Produce Presentation	1.1 Use appropriate techniques to save a presentation.
	1.2 Use appropriate techniques to save a slide show
	Combine information
	1.3 Link information using integrated software of similar type.
	Import
	1.4 Import information to create documents.
	Export
	1.5 Export information to create documents.
	Edit text
	1.6 Use a wide range of **editing techniques** appropriately.
	Check presentation
	1.7 Use proof reading techniques to check that text and images are correct.
	1.8 Check that text formatting techniques are used appropriately.

1.9   Check that images and other objects are positioned and edited appropriately.

Format slides

1.10   **Format** presentations using appropriate tools and techniques.

Produce presentations

1.11   Choose an appropriate method and presentation style to suit audience.

1.12   Choose, and appropriately adjust templates for presentations.

Present slides

1.13   Use tools and techniques to create an animation and sound.

1.14   Create speaker notes.

Present presentation

1.15   Start and end slide show

1.16   **Control** slide show

1.17   Deliver presentation to audience.

Print

1.18   Use different **print options**.

RANGE STATEMENT

You must cover the items below:

A.   Use appropriate techniques and **combine information** for**:**

      (i)   an image into a presentation slide
      (ii)   a graph into a presentation slide
      (iii)   creating links to other documents

B.   Use **editing techniques** for:

      (i)   inserting and deleting text
      (ii)   inserting and deleting objects
      (iii)   resizing images
      (iv)   changing the position or orientation of objects

C.   Use **print options** for:

      (i)   speaker's notes
      (ii)   handouts

D.   Use techniques for **presentation** to:

      (i)   change colour schemes for slides
      (ii)   use an organisational house style

E.   Use tools and techniques to **present slides:**

      (i)   appropriately time the presentation
      (ii)   add transition to slides

F.   **Control slide show** to:

      (i)   move backward
      (ii)   move forward
      (iii)   select specific slide

UNDERPINNING KNOWLEDGE AND SKILLS

What you need to know and understand:

Produce information

1. How to produce information that communicates clearly and accurately with the audience, where and when it is needed.

Presentations

2. How to produce professional looking presentations for a wide variety of uses. Professional looking documents are well structured and appropriately styled so that they communicate effectively.

Images, objects and sound

3. How to include still images (e.g. downloading photos from a digital camera) and other objects produced using different software.

For assessment purposes:

(1)   **Critical Aspects of Evidence**

You will need to produce at least **two comprehensive tasks**.

Your evidence must show that you have met **all** the performance criteria, range and underpinning knowledge and skills requirements.

A.   Use appropriate techniques and **combine information** to**:**

      (i)   an image into a presentation slide
      (ii)   a graph into a presentation slide
      (iii)   create links to other documents

B.   Use appropriate **editing techniques** for**:**

      (i)   inserting and deleting text
      (ii)   inserting and deleting objects
      (iii)   resizing images
      (iv)   changing the position or orientation of objects

C.   Use **Print options** for:

      (i)   speaker's notes
      (ii)   handouts

D.   Use **presentation techniques** to:

      (i)   change colour schemes for slides
      (ii)   use an organisational house style

E.   **Present slides using tools and techniques to:**

      (i)   appropriately time the presentation
      (ii)   add transition to slides

F.   **Control slide show** to**:**

      (i)   move backward
      (ii)   move forward
      (iii)   select specific slide

(2)   Methods of Assessment

Typical task size: A presentation of about ten (10) slides to include at least two (2) self-produced animations.

Observation by your assessor of you:

- Handling files and combining information (e.g. adding images, objects and sound).
- Using a wide range of editing techniques appropriately for presentations such as:

  - inserting objects
  - resizing images
  - changing the position or orientation of other objects.

- Checking presentations:

  - using proof reading techniques to check text
  - for appropriate text formatting techniques
  - for appropriate positioning and editing of images and other objects

- Formatting complex presentations using appropriate tools and techniques, such as changing colour schemes for slides or using an organisational house style

- Choosing an appropriate method and presentation style to suit audience needs

- Choosing and appropriately adjust templates for presentations

- Saving a presentation as a slide show

- Control a slide show

- Use different print options

Work products: e.g., data presented in a suitable format to meet specifications.

Answers to written or oral questions from your assessor.

(3)   Context of Assessment

The evidence may come from activities in your workplace and/or from simulation.

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Level 2 — Glossary of Terms

Level 2

Glossary of Terms

Assessment methods

The methods which can be used to determine competence in performance and underpinning knowledge.

Assessors

The Assessor's role is to determine whether evidence presented by a candidate for assessment within the programme, meets the required standard of competence in the relevant unit or element. The Assessor needs to be competent to assess to national standards in the area under assessment.

Approved Centre

Organization/Centre approved by the TVET Council to offer full National Vocational Qualifications.

Case Studies

In situations where it is difficult for workplace assessment to take place, case studies can offer the candidate an opportunity to demonstrate potential competence.

A case study is a description of an actual or imaginary situation presented in some detail. The way the case study is presented will vary depending upon the qualification, but the most usual methods are written, taped or filmed.

The main advantage of a case study is the amount of evidence of underpinning knowledge they can generate and the specific nature of the evidence produced.

Competence

In the context of vocational qualifications, competence means: the ability to carry out prescribed activities to nationally pre-determined standards in an occupation. The definition embraces cognitive, practical and behavioural skills, underpinning knowledge and understanding and the ability to react appropriately in contingency situations.

Element

An element is a description of an activity which a person should be able to do. It is a description of an action, behaviour or outcome which a person should be able to demonstrate.

Explanation of NVQ Levels

NVQs cover five (5) levels of competence, from entry level staff at Level 1 through to senior management at Level 5.

Level 1 - Entry Level

Recognizes competence in a range of varied work activities performed in a variety of contexts. Most work activities are simple and routine. Collaboration with others through work groups or teams may often be a requirement. Substantial supervision is required especially during the early months evolving into more autonomy with time.

Level 2 - Skilled Occupations:

Recognizes competence in a broad range of diverse work activities performed in a variety of contexts. Some of these may be complex and non-routine and involve some responsibility and autonomy. Collaboration with others through work groups or teams and guidance of others may be required.

Level 3 - Technician and Supervisory Occupations:

Recognizes competence in a broad range of complex, technical or professional work activities performed in a wide variety of contexts, with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources are often a requirement. The individual is capable of self-directed application, exhibits problem solving, planning, designing and supervisory capabilities.

Level 4 - Technical Specialist and Middle Management Occupations:

Recognizes competence involving the application of a range of fundamental principles and complex techniques across a wide and unpredictable variety of contexts. Requires very substantial personal autonomy and often significant responsibility for the work of others, the allocation of resources, as well as personal accountability for analysis, diagnosis, design, planning, execution and evaluation.

Level 5 - Chartered, Professional and Senior Management Occupations:

Recognizes the ability to exercise personal professional responsibility for the design, development or improvement of a product, process, system or service. Recognizes technical and management competencies at the highest level and includes those who have occupied positions of the highest responsibility and made outstanding contribution to the promotion and practice of their occupation.

External Verifier

The External Verifier is trained and appointed by the TVET Council and is competent to approve and ensure an approved Centre's quality of provision.

Internal Verifier

The Internal Verifier acts in a supporting role for Assessors to ensure consistent quality of assessment and competence. They need to be competent to assess to national standards in the area under assessment.

NVQ

National Vocational Qualifications (NVQs) are work-based qualifications that assess an individual's competence in a work situation and certify that the individual can perform the work role to the standards expected in employment.

NVQs are based on national occupational standards of competence drawn up by standards-setting bodies known as Industry Lead Bodies. The standards describe the level and breadth of performance that is expected of persons working in the industry or sector which the NVQ covers.

NVQ Coordinator

Within each approved Centre offering NVQs, there is a centre contact who has overall responsibility for the operation and administration of the NVQ system.

Observation

Observation of the candidate carrying out his/her job in the workplace is the assessment method recommended in the vast majority of units and elements. Observation of staff carrying out their duties is something that most supervisors and managers do every day.

Performance criteria

Performance criteria indicate what is required for the successful achievement of an element. They are descriptions of what you would expect to see in competent performance.

Product of Work

This could be items produced during the normal course of work, which can be used for evidence purposes such as reports, menus, promotional literature, training plans, etc.

Questioning

Questioning is one of the most appropriate ways to collect evidence to assess a candidate's underpinning knowledge and understanding.

Questioning can also be used to assess a candidate in those areas of work listed in the range which cannot be assessed by observation. Guidance on when this assessment method can be used is given in the assessment guidance of each individual element.

As an assessment method, questioning ensures you have all of the evidence about a candidate's performance. It also allows you to clarify situations.

Range statements

The range puts the element of competence into context. A range statement is a description of the range of situations to which an element and its performance criteria is intended to apply.

Range statements are prescriptive therefore each category must be assessed.

Role-plays

Role-plays are simulations where the candidate is asked to act out a situation in the way he/she considers "real" people would behave. By using role-play situations to assess a candidate you are able to collect evidence and make a judgment about how the candidate is most likely to perform. This may be necessary if the range specified includes a situation in which the candidate is unlikely to find himself/herself in the normal course of their work, or where the candidate needs to develop competence, before being judged competently, for example, in a disciplinary situation,

Simulations

Where possible, assessment should always be carried out by observing **natural performance** in the workplace. **Simulated performance,** however, can be used where specified to collect evidence about an aspect of the candidate's work which occurs infrequently or is potentially hazardous; for example, dealing with fires.

By designing the simulated situation, briefing the candidate and observing his/her performance, you will be able to elicit evidence which will help you judge how a candidate is **most likely** to perform in real life.

Supplementary evidence

Supplementary evidence can be used to confirm and support performance evidence. Types of supplementary evidence include witness testimonies, reports, journals or diaries, records of activities, personal statements, simulation (see note in glossary).

Underpinning knowledge

Underpinning knowledge indicates what knowledge is <u>essential</u> for a person to possess in order to successfully achieve an element and prove total competence.

Units

A unit of competence describes one or more activities which form a significant part of an individual's work. Units are accredited separately but in combination can make up a vocational qualification. There are three categories of units:

Mandatory units - are core to a qualification and must to be completed.

Optional units - candidates must choose the required number of individual units, specified in the qualification structure, to achieve the qualification.

Additional units - are units which the candidate can undertake but are not a requirement to achieve a qualification

Work-based projects

Work-based projects are a useful way for you to collect evidence to support any decision you make about a candidate's performance. They are particularly appropriate in determining the level of a candidate's underpinning knowledge and understanding where it may be insufficient to rely only on questioning observation.

A project often involves the identification of a solution to a specific problem identified by you and/or the candidate (such as looking at ways to redress a recent drop in sales), or may be a structured programme of work built around a central situation or idea (such as the introduction of a new job rostering process).

ICT Key Words

Address Book

Usually supplied as part of your Email software. An address book in this sense is used to keep a record of all the email addresses of people whom you may wish to contact by email.

Animation

The display of a sequence of images in a computer program or on a Web page to give the impression of movement.

Application

A computer program or a suite of computer programs that perform a particular function for the user, such as a word-processor, e.g. Microsoft Word, or a range of functions, such as Microsoft Windows or Microsoft Office. (See Computer Program, Operating System, Windows, and Word-processor).

Attachment

A term used in connection with Email. An attachment can be a file of almost any kind - a document file, an image file, a sound file or a video clip - that you can add, i.e. attach, to an email.

Anti-virus Software: See Virus

Bandwidth

The amount of data that can be sent from one computer to another through a particular connection in a certain amount of time, e.g. via a computer to the Internet and vice versa. The more bandwidth available, the faster you are able to access information. Bandwidth is usually measured in kilobits per second (Kbps) or megabits per second (Mbps).

Bitmap:

BMP: Abbreviation for Bitmap, a file format for storing images. This is the standard format used, for example, by Windows Paint. BMP image files occupy quite a lot of space compared to other formats. A computer graphic or image composed of thousands of individual dots or pixels, each pixel being stored as a number. The image is displayed by specifying the colour of each pixel. Bit-mapped graphics can be imported into other applications, e.g. a word-processor, but they cannot be edited within these applications. When bit-mapped graphics are resized they usually suffer a loss of sharpness, whereas vector graphics can be resized without such loss.

Bookmark

A bookmark is a facility within a Browser that enables you to keep a record of Web pages that you have visited and may wish to visit again. Bookmarks are stored in a subdirectory of the Windows directory on your computer. In Internet Explorer bookmarks are known as Favorites (sic - spelt the American way), which is also the name of the subdirectory in which they are stored. Bookmarks are also used to mark positions in a Word document, i.e. positions to which you can jump from other points in the document by clicking on them with the Mouse.

Browser

A software package installed on the hard disk of your computer that enables you to access and to navigate the World Wide Web - to "surf the Web" in colloquial terms. Internet Explorer and Netscape are two browsers that are in widespread use.

CD-ROM

Abbreviation for Compact Disk Read Only Memory. A CD-ROM is an Optical Disk on to which data has been written via a laser - a process often referred to as "burning a CD": A CD-ROM looks much the same as an audio CD, but can contain text, sound, pictures and motion video. Once written, the data on a CD-ROM can be fixed and rendered unalterable, hence the term read-only - but modern computers are usually equipped with a read/write CD-ROM drive that enables new material to be stored on a special kind of CD-ROM: CD-R (recordable) or CD-RW (rewriteable).

Data

Strictly speaking the plural of "datum", but now usually considered as a collective noun in the singular, with the plural form "data items" or "items of data". Data is information in a form which can be processed by a computer. It is usually distinguished from a computer program, which is a set of instructions that a computer carries out. Data can be text or sets of figures on which a computer program operates.

Database:

A structured collection of data that can be used for a variety of purposes. A database may contain data relating to staff employed by a company or to students at an educational institution. In order to set up and manage an electronic database you need a database program such as Microsoft Access.

Desktop Publishing (DTP)

An Application for laying out text, graphics and pictures in order to produce a professional-looking publication. Most modern word-processors can now achieve what older DTP packages were capable of producing. Examples of DTP applications are QuarkXpress and PageMaker, which have probably become too complex and technical for the inexperienced user and are now aimed at the professional graphic designer or layout artist.

Digital Camera

A camera used for taking still photographs - but some digital cameras can also record short sequences of moving images. A digital camera looks much the same as an ordinary camera but stores photographs in electronic format so that they can be uploaded onto a computer. The more expensive digital cameras achieve better results than can be achieved by using an ordinary camera and a scanner.

Domain Name:

A unique name that identifies a Website. A domain name can be purchased from and registered by a domain name registration company.

Email:

Contraction of Electronic Mail. A system for creating, sending and receiving messages via the Internet. In order to send and receive email messages you have to register with an Internet Service Provider (ISP) that provides an email service and have email software such as Outlook or Eudora installed on your computer. Many ISPs also offer a Webmail facility, which provides an alternative means of creating, sending and receiving email messages using your Web Browser.

Ergonomics:

Ergonomics is the process of changing the work environment (equipment, furniture, pace of work, etc.) to fit the physical requirements and limitations of employees, rather than forcing workers to adapt to jobs that can, over time, have a debilitating effect on their physical well-being.

File:

A file in computer jargon can be used to describe many different things. It may be a Computer Program, a document file created with a Word-processor, an image file, an audio file, a video file, etc. Think of it in the same way as you would think of a file in a filing cabinet. A file has a name that describes what it is, and the file is stored in a place where you can easily find it. Files are usually grouped together on a computer's Hard Disk in directories or folders and, as well as their names, they usually have a three-letter Extension that tell you what their function is or what they contain, e.g. fwtt.exe is a program, mystory.doc is a Word document, sally.jpg is a picture, and mydog.mpg is a video file. Files may also be stored on other Storage Media, such as CD-ROMs, DVDs and flash drives
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Flash Drive

A portable Storage Device. Flash drives look like a small flat pen, around 5cm to 10cm long, and are easily carried in your pocket. Their storage capacity is impressive; 10GB is not unusual these days. They are used to store data that you wish to carry around, e.g. a PowerPoint presentation, and they can be plugged into any computer with a USB socket. Flash drives are also commonly referred to as pen drives or memory sticks.

FTP

Abbreviation for File Transfer Protocol. This is the method, i.e. a software standard, used for transferring files from one computer to another via the Internet. FTP is also used as a verb in the sense "to transfer" (a file).

Hardcopy or Hard Copy

Printed output from a computer, as opposed to output on screen.

Hardware

The physical elements of a computer system - the bits you can see, touch, drop, kick or fall over. Contrasted with Software.

Hazard

A hazard is something with the potential to cause harm.

Host Name or Hostname:

A host name is the unique name of a computer on the Internet, which is normally written as a series of letters, for example www.hull.ac.uk. A host name is the human-friendly form of the host's numerical IP address, i.e. it's an alias for the "real" Internet address of the host computer, e.g. 150.237.176.24.

HTML

Abbreviation for Hypertext Markup Language. The coding system used for creating pages on the World Wide Web. HTML enables the author to control how the page appears and to insert Hypertext links within one Web page or to other pages anywhere on the Web. Nowadays most Web authors and designers use an Authoring Tool such as Front Page or Dreamweaver to create World Wide Web pages.

HTTP

Abbreviation for Hypertext Transfer Protocol. The transfer method (protocol) used by the World Wide Web to transmit and receive Web pages. This abbreviation normally precedes the name of a website, e.g. http://www.ict4lt.org, to tell your computer that this is the way in which you wish to communicate with other computers on the Internet.

Hyperlink

A contraction of hypertext link, the essence of Hypertext and the HTML language used for creating pages on the World Wide Web. In a Web document a hyperlink can be a sequence of letters or an image. By clicking on the area designated as a hyperlink by the person who created the Web page, it is possible to jump quickly to another part of the page, a different page on the same website, or to a completely different website. Hyperlinks can also be inserted into a Word document, enabling the reader to jump from one point in the document to another, or out of the document to a website.

Hypertext

A system for the non-sequential presentation of text, the fundamental concept of the World Wide Web, whereby the user can jump from one part of a text to another, from one Web page to another, or from one website to another, by clicking on highlighted (and usually underlined) hyperlinks.

ICT

ICT: Abbreviation for Information and Communications Technologies.

Input

Anything that goes into a computer in order to be processed and/or stored. Also used as a verb.

Input Device

Any device that is capable of inputting information into a computer system, e.g. a Keyboard, Microphone, Mouse or Scanner.

Internet

The Internet, or simply "the Net", is a computer network connecting millions of computers all over the world. It provides communications to governments, businesses, universities, schools and homes. Any modern computer can be connected to the Internet using existing communications systems. Schools and universities normally access the Internet via their own educational networks, but private individuals usually have to take out a subscription with an Internet Service Provider (ISP). Although the Internet is in fact a network of networks, it appears to users as a network of individual computers.

Internet Service Provider (ISP)

A company that provides a subscription service to enable you to access the Internet. An ISP has a network of computers permanently linked to the Internet. When you take out a subscription with an ISP they link your computer to their network, usually via an existing telephone line, but dedicated lines are also provided by some ISPs. ISPs also give you an Email address and space on the World Wide Web for setting up your own website.

Intranet:

A private network inside a company or educational organisation and used over its LAN (Local Area Network). A sort of local Internet. Contrasted with Internet, which is publicly available.

IP Address:

Short for Internet Protocol Address. The unique numerical address of a computer on the Internet, expressed as four sets of numbers (maximum 3 digits each) separated by dots: e.g. 150.237.176.24 for one of the computers at the University of Hull - where the ICT4LT website is located. Computers on the Internet are nearly always referred to by more memorable domain names, which are mapped onto their IP addresses by special Internet computers known as name servers.

JPEG or JPG

Abbreviation for Joint Photographic Expert Group. Pronounced "Jaypeg". A file format used for storing images. The JPEG/JPG format uses a palette of millions of colours and is primarily intended for photographic images. JPEG/JPG files are commonly used for storing images on the Web.

LAN:

Abbreviation for Local Area Network. A Network of computers at one site that provides services to other computers connected to it.

Navigation:

This describes the process of finding your way, i.e. navigating, around a series of menus within a computer program or finding your way around the World Wide Web by means of a Browser.

Netiquette

Etiquette on the Internet. A code of behaviour for people communicating by email via the Internet.

Network

A group of computers connected together, either by physical connections such as cables, or by wireless connections (see Wi-Fi). The Internet is a worldwide network of computers to which virtually any computer can be connected.

PDF

An abbreviation for Portable Document Format. This is a file type created by Adobe that allows fully formatted, documents to be transmitted across the Internet and viewed on any computer that has Adobe Acrobat Reader software.

Peripheral Device

Often abbreviated to peripheral. Virtually any device which can be connected to a computer. This term includes modems, printers, scanners, interactive whiteboards, etc.

Pixel:

A contraction of picture element. What you see on a computer Display Screen is made up of thousands of coloured pixels or small dots.

Presentation Program / Presentation Software

Used to describe software such as PowerPoint, part of the Microsoft Office suite of programs. Presentation Software is used in conjunction with a Data Projector and a wall screen or Interactive Whiteboard in order to display a series of slides relating to a business presentation, a lesson or lecture.

Risk

A risk is the likelihood of harm occurring or exposure to the chance of injury or loss; a hazard or dangerous chance.

Search Engine

A search facility provided at a number of sites on the World Wide Web. Search engines enable the user to search the whole of the Web for key words and phrases and to locate related websites. This is a useful facility for locating information. Commonly used search engines are provided by Alta Vista, Ask, Google, Lycos and Yahoo.

Server

A computer which provides services to other computers, which are known as clients. For example, when you click on a link in a Web page your Browser sends a request to a remote computer, known as a Web Server, which serves the requested page to your browser, which then displays it on your computer screen. A Local Area Network (LAN) has a server that delivers software to the computers (also known as workstations) that are connected to it. It is usually the most powerful computer in the network. Users connected to a LAN can access their own files remotely and exchange information with the server and other users connected to the network.

Software

The opposite to Hardware. A generic term describing all kinds of computer programs, applications and operating systems. Software is not tangible, being a set of instructions written in a Programming Language comprising a set of instructions that the computer executes.

Spellchecker or Spell-checker

An electronic dictionary, usually part of a Word-processor, which scans the text entered by the user and highlights any word that it does not recognise. The author of the text is then given the option to correct, ignore or add any highlighted word to the dictionary. Spellcheckers can be set to accommodate different varieties of a language, e.g. British or American English, and many other languages. Many email packages also include a spellchecker.

Spreadsheet

An electronic accounting program. Such programs like Microsoft Excel can also be used for purposes other than those which relate to accounting practices.

Storage Device

Equipment used for accessing and recording (i.e. storing) computer programs, texts, images, audio recordings and video recordings, etc. The term Storage Medium refers to the actual material used for storing such information, although a Flash Drive, for example, could be referred to both as a storage device and as a storage medium.

Storage Medium (sing.) / Storage Media (pl.)

A medium (pl. media) which is used to record (i.e. store) computer programs, texts, images, audio recordings and video recordings, etc. The term Storage Device refers to the equipment used for accessing and recording (i.e. storing) such information. Examples of storage media include CD-ROMs, DVDs, Floppy Disks and Hard Disks.

TCP/IP

Abbreviation for Transfer Control Protocol / Internet Protocol. The main data transfer protocol used on the Internet. See Internet.

TIFF or TIF

Abbreviation for Tag Image File Format. A file format for storing images on a computer. TIFF files can store very high-quality images with millions of colours, but they are very demanding in terms of storage space.

Trackball or Tracker Ball

A Pointing Device. A sort of upside-down Mouse, with the ball facing upwards. The user manipulates the track of the Cursor on the screen by moving the ball with the palm of the hand or fingers.

Upload

To transfer a copy of a computer program, a text file, an image file, a sound file or a video file from one computer to another computer. This term can also be used to describe the process of: (i) transferring a photograph from a digital camera to a computer, (ii) transferring a sound recording from a digital sound recorder to a computer, and (iii) transferring a video recording from a Camcorder or Digital Camera to a computer.

URL:

Abbreviation for Uniform Resource Locator. Also known as a Web Address. A URL contains the location of a resource on the Internet. A URL specifies the address of the computer where the resource is located, which may be the homepage of a website, e.g. http://www.ict4lt.org, or a sub-page, e.g. http://www.ict4lt.org/en/en_mod2-1.htm. The http:// prefix can usually be omitted from a URL when it is entered in a Browser.

Vector Graphic

A method of creating graphic images on a computer by telling it to draw lines in particular positions. An advantage of a vector graphic is that it can be enlarged or reduced in size without loss of sharpness or distortion. Most modern image creation and editing packages can save images in vector graphic format. Vector graphics can be contrasted with bit-mapped graphics, which are made of a fixed number of pixels (small dots), and therefore sharpness may be lost when the image is resized.

Virus

A virus is an illicit program. If you surf the Web, use email or floppy disks sent to you by other people, you need to be protected against virus invasions. Viruses can be highly contagious, finding their way onto your computer's hard drive without your being aware of it and causing considerable damage to the software and data stored on it. Viruses can be contracted from files attached to email messages, e.g. Microsoft Word files, or direct from the Web. Be very wary of opening an email attachment of

unknown origin, as this is the commonest way of spreading viruses. Software used to protect your computer against the invasion of computer viruses is known as anti-virus software.

WAN

Abbreviation for Wide Area Network. A network of computers located at geographically separate sites. See LAN, MAN.

Webmail:

A facility for creating, sending and receiving messages via the Internet. Webmail offers an alternative to using email software such as such as Outlook or Eudora: see Email. In order to use webmail you have to register with an Internet Service Provider (ISP) and you can then access their email service via your Web Browser.

Website

An area on the World Wide Web where an organisation or individual stores a collection of pages of material - Web pages. The pages are usually interlinked with one another and with other websites. Every website has a unique Web Address or URL.

Word-processor

Probably the most widely used computer application program. Modern word-processors allow the user to create fine-looking documents including images, tables, photographs, and even sound and video recordings if they are to be viewed on screen rather than from the printed page. In many respects they are similar to Desktop Publishing applications. Word-processors normally include a spellchecker, a grammar checker, a style checker and a thesaurus, as well as tools for writing in HTML, the coding language used for producing Web pages. Word-processors have been widely used in teaching and learning foreign languages ever since they first appeared.

World Wide Web

Usually referred to simply as the Web. This is the most powerful and fastest growing Internet service. The World Wide Web was the brainchild of Tim Berners-Lee, who in 1989 invented the HTML coding language that is the basis of the Web. The Web became a public service in 1993. It is a huge collection of resources of information, including learning materials, which is accessed by means of a computer program known as a Browser. The World Wide Web is only part of the Internet, but many people treat both terms as synonyms.

XML

Abbreviation for extensible Markup Language. XML is a specification emanating from the World Wide Web Consortium (W3C) that allows Web designers to create their own language for displaying documents on the Web. XML is an extension to the standard language for creating Web pages, HTML, and makes it possible to create websites containing more complex interactivity.

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