**COADS201- DATA AND STORAGE MANAGEMENT**

**Manage Data and Storage**

**Competence**

**RQF Level: 2 Learning Hours**

**140**

**Credits: 14**

**Sector: ICT and Multimedia**

**Trade: Computer Application**

**Module Type: Specific**

**Curriculum: ICTCOA201- TVET Certificate 2 in Computer Application**

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| **Purpose statement** | This specific module provides the skills, knowledge and attitude for a learner to be competent in a range of routine tasks and activities. Upon completion of this module, the learner will be able to apply the practical skills in a defined context like installing security software, scanning storage devices, performing shrink partition of hard disks, storing digital data, uploading and downloading digital data, creating YouTube channel and burning digital data on CD/DVD. | | | | | |
| **Learning Assumed to be in Place** | * Safety, Health and Environment at workplace * Computer and its peripherals * Online essentials and platforms | | | | | |
| **Delivery modality** | Training delivery | | 100% | Assessment | | Total 100% |
| Theoretical content | | 30% | Formative assessment | 30% | 50% |
| Practical work: | | 70% | 70% |
| * Group project and presentation | 20% |
| * Individual project /Work | 50% |
|  | | Summative Assessment | | | 50% |

Elements of Competency and Performance Criteria

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| **Elements of competency** | **Performance criteria** |
| 1. Describe digital data management | 1.1. Data and information are well described as used in computer system |
| 1.2. File and folder are well described according to their usability |
| 1.3 Storages (local and cloud) are well described according to work to be done |
| 1. Use data storage | 2.1. File and folder are well created according to task and customer needs |
| 2.2. file is well saved according to its corresponding folder |
| 2.3. Information is well stored according to work to be done |
| 2.4. Disk is properly maintained according to task |
| 1. Manipulate data and storage | 3.1. Files are converted and compressed properly according to customer need |
| 3.2. Data transfer is well performed according to different storage and website requirements. |
| 3..3. Digital contents are appropriately burnt on CD/DVD according to task performed |
| 3.4. Data are well secured according to task accomplished |

**Course content**

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| **Learning outcomes** | **At the end of the module the learner will be able to:**  1. Introduce digital data management  2.Use data storage  3. Manipulate data and storage |

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| **Learning outcome 1: Describe Digital Data Management** | | **Learning hours: 20** |
| **Indicative content** | | |
| * Description of data and information * Definition * Difference between data and information * Digital data measurements (units of information) * Conversion of digital data measurements * Description of file and folder * Definition * Difference between file and folder * Types of files and extension * Description of local and cloud storage * Definition * Difference between local storage and Cloud storage | | |
| Resources required for the learning outcome | | |
| **Equipment** | * Computer | |
| **Materials** | * Internet, electricity | |
| **Tools** | * Operating system * Storage media | |
| **Facilitation techniques** | * + Demonstration   + Group discussion   + Brainstorming | |
| **Formative assessment methods** | * Written assessment * Oral presentation | |

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| **Learning outcome 2: Use Data Storage** | | **Learning hours:45** |
| **Indicative content** | | |
| * Creation of file and folder * File * Folder * Exploration of file explorer * Save,copy and paste * Undo/redo * Delete temporally or permanent files * Recycle bin * Storage of information * Local * Cloud * Disk maintenance * Purpose of disk maintenance * Tools and techniques for disk maintenance * Partition(shrink) * Disk cleanup * Optimization of disk * Scan malwares * Restore files * Disk quota * Disk formatting | | |
| Resources required for the learning outcome | | |
| **Equipment** | * Computer | |
| **Materials** | * Internet, * Electricity | |
| **Tools** | * Operating system * Security software * Storage media | |
| **Facilitation techniques** | * + Demonstration   + Group discussion   + Brainstorming | |
| **Formative assessment methods** | * Written assessment * Oral presentation * Performance assessment | |

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| **Learning outcome 3: Manipulate Data and Storage** | | **Learning hours: 75** |
| **Indicative content** | | |
| * + Converting and compressing files * Types of files and extension * File size * File conversion software and online file converters * File compression software and online file compressors   + Transferring data * Data communication basics * Definition * Basic components (Messages, Sender, Receiver, Medium, Protocol) * YouTube Chanel creation * Upload data to YouTube * Download data from YouTube   + Burning digital contents   + Definition   + Differentiate CD and DVD   + Use burning software   + Securing data * Purpose of data security * Techniques to secure data * Installation of security software * Protection by using strong password * Data backup and restore * Creation of user accounts * Password remover * Protection by windows firewall * Protection through ports locking * Apply Software Updates | | |
| Resources required for the learning outcome | | |
| **Equipment** | * Computer | |
| **Materials** | * CD * DVD * Internet * Electricity | |
| **Tools** | * Operating system * Burning software * Web browser * Security software * Port locker software * File conversion software * File compression software * Storage media * External CD room | |
| **Facilitation techniques** | * + Demonstration   + Group discussion   + Brainstorming   + Practical exercises | |
| **Formative assessment methods** | * Written assessment * Oral presentation * Performance assessment | |

Integrated/Summative assessment

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| Integrated situation  **HOPE TVET SCHOOL** is a school located in KAYONZA district. The school has the security issue of a video taken from school event. The video is stored on local disk D of a computer hard disk. The video is in **AMV** (Actions Media Video) format with the size of **1GB** and is attacked by malwares. The school decided to hire an end user IT assistant to secure the data. You are hired as an end user IT assistant to secure the school data by installing an anti-virus and scan local disk D, performing shrink partition of local disk D to create local disk E, storing the said video on new created local disk, uploading an **MP4** file of less than the original size to YouTube channel called **HOPE TVET SCHOOL** and burning the compressed video on DVD to submit it to the School Manager.  You are requested to do the above tasks within 3 hours.  All equipment, materials and tool needed to perform all the tasks are provided.  **Resources**   |  |  | | --- | --- | | **Tools** | * Operating system * Burning software * Web browser * Video Converter software * Video compressor software | | **Equipment** | * Computer | | **Materials/ Consumables** | * Internet * DVD | | | | | | |
| **Assessable outcomes** | **Assessment criteria (Based on performance criteria)** | **Indicator** | **Observation** | | **Marks allocation** |
| **Yes** | **No** |
| **Use data storage (30%)** | Disk is properly maintained | Ind.1. The anti-virus installed |  |  | 10 |
| Ind.2. The local disk D is scanned |  |  | 5 |
| Ind.3. Shrink partition is performed |  |  | 10 |
| Data and information are well stored | Ind.1.The video is stored |  |  | 5 |
| **Manipulate data and storage (70%)** | Files are converted and compressed properly according to customer need | Ind.1 File is converted |  |  | 5 |
| Ind.2.File is compressed |  |  | 5 |
| Data transfer (uploading and downloading) is well performed according to different storage and website requirements. | Ind.1.YouTube is accessed |  |  | 5 |
| Ind.2. Signing in is done |  |  | 10 |
| Ind.3. Profile picture is entered |  |  | 10 |
| Ind.4. YouTube Channel is created |  |  | 15 |
| Ind.2. Video is uploaded |  |  | 10 |
| Digital contents are appropriately burnt on CD/DVD | Ind.1. Digital content is burned on DVD |  |  | 10 |
| **Total marks** | | **100** | | | |
| **Percentage Weightage** | | **100%** | | | |
| **Minimum Passing line % (Aggregate): 70%** | | | | | |

References

1. Retrieved June 4th, 2022, from http://www.waterlooregion.org/sites/default/files/Files\_and\_Folders\_Handout.pdf
2. (2015, June). Retrieved June 04, 2022, from cre8te.co.uk: http://cre8te.co.uk/wp-content/uploads/2014/07/Files-And-Folders-Updated-June-2015.pdf
3. Aker, A. P. (2017, May 24). *http://nji.gov.ng.* Retrieved June 4th, 2022, from http://nji.gov.ng: http://nji.gov.ng/images/Workshop\_Papers/2017/IT\_Workshop/s3.pdf
4. *bigpdf.11zon.com*. (n.d.). Retrieved June 4th, 2022, from bigpdf.11zon.com: https://bigpdf.11zon.com/en/compress-pdf/compress-pdf-to-100kb.php
5. Examination, C. I. (2017). *Cambridge International AS&A Level Information Technology 9626.* 1 Hills Road,United Kingdom: A division of CAMBRIDGE ASSESSMENT.
6. Fang, P. F. (2011, 12 13). *public.csusm.edu.* Retrieved June 4th, 2022, from public.csusm.edu: https://public.csusm.edu/fangfang/Teaching/HTMmaterial/StudentProjectFall2011/Team3.pdf
7. *https://www.pdf2go.com/*. (n.d.). Retrieved June 4th, 2022, from https://www.pdf2go.com/: https://www.pdf2go.com/
8. *www.freeconvert.com*. (n.d.). Retrieved June 4th, 2022, from www.freeconvert.com: https://www.freeconvert.com/video-compressor