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| **FURTHER EDUCATION AND TRAINING CERTIFICATE: INFORMATION TECHNOLOGY: SYSTEMS DEVELOPMENT**  **ID 78965 LEVEL 4 – CREDITS 165** |
| **LEANER WORK BOOK**  **SAQA: 14933**  **Demonstrate an understanding of creating multimedia/web-based computer applications with scripting** |

**Learner Information:**

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| **Details** | **Please Complete this Section** |
| Name & Surname: | Mila Mihlali Ngewu |
| Organisation: | Loome Group |
| Unit/Dept: | ICT |
| Facilitator Name: | Anneline Nombeko |
| Date Started: | 02/10/2023 |
| Date of Completion: | 03/10/2023 |

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**OVERVIEW**

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| **About the Learner Workbook** | This Learner Exercise Workbook has been designed and developed to evaluate learners’ level of understanding of the **Demonstrate an understanding of creating multimedia/web-based computer applications with scripting** It forms part of a series of Learner Workbooks that have been developed for **FURTHER EDUCATION AND TRAINING CERTIFICATE: INFORMATION TECHNOLOGY: SYSTEMS DEVELOPMENT ID 78965 LEVEL 4 – CREDITS 165** | | |
| **Purpose** | The purpose of this Learner Exercise Workbook is to evaluate learners understanding on the specific outcomes and/or assessment criteria of the following SAQA Registered Unit Standards: | | |
| **US No** | **US Title** | **Level** | **Credits** |
|  | **Demonstrate an understanding of creating multimedia/web-based computer applications with scripting** | **4** | **6** |
| **Context** | This assessment represents the Formative Assessment component of Function in a business environment**,** for the **FURTHER EDUCATION AND TRAINING CERTIFICATE: INFORMATION TECHNOLOGY: SYSTEMS DEVELOPMENT ID 78965 LEVEL 4 – CREDITS 165** and should be completed in the classroom/training room. | | |
| **Resources** | The following are resources needed for this assessment:   * Learner Guide; and * Assessment Preparation. | | |
| **Instructions to Facilitators** | Facilitators will be required to:   * Explain the completion of the workbook to each learner; and * Interview the learner on similar questions, should he/she not be able to write. | | |
| **Instructions to Learners** | Learners will be required to:   * Complete the workbook as per the instructions; * Ensure that all questions are completed; * Ensure that the completion of the workbook is their own work; * Ensure that all annexure are attached to the workbook and clearly referred to; | | |
| **Assessment Time** | Learners are required to complete this assessment within the allocated time frame of.... hours. | | |
| **Total Mark** | This formative assessment carries a total mark of **\_ points**. In order to meet the pass mark, learners are required to achieve a minimum of **80%** of the total marks. | | |
| **Equipment** | Learners are required to have the following equipment in order to complete this workbook:   * Pen and Pencil; * Ruler; and * Exam Pad – for additional paper. | | |

**GENERAL INFORMATION**

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| **LEARNER DETAILS** | | |
| **Learner Full Names** | **Mila Mihlali Ngewu** | |
| **Learner ID No.:** | **9909106615084** | |
| **Organisation:** | **Loomee Group** | |
| **Unit/Dept:** | **ICT** | |
| **Contact Details:** | **Telephone /Cell Numbers:** | **Email Address:** |
| **082 365 5804** | ngewumila007@gmail.com |
| **WORKSHOP DETAILS** | | |
| **Workshop Venue:** | **Nelson Mandela Bay iHUB** | |
| **Facilitator Name:** | **Anneline Nombeko** | |
| **Date Started:** | **02/10/2023** | |
| **Date Completed:** | **03/10/2023** | |

**ASSESSMENT PREPARATION CHECKLIST**

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| **DESCRIPTION** | **YES** | **NO** | **COMMENTS/CONTINGENCY** |
| This assessment is a formative assessment and it is based on the outlined unit standard/s for **Demonstrate an understanding of creating multimedia/web-based computer applications with scripting** module. | √ |  |  |
| Your assessment evidence for **Demonstrate an understanding of creating multimedia/web-based computer applications with scripting** module needs to be submitted on....... (day) of...............(month)...........(year) at the following address/place................................................................ | √ |  |  |
| You will be assessed based on the outlined Unit Standards. The assessment activities are linked to specific outcomes/assessment criteria of the outlined Unit Standards. | √ |  |  |
| To determine your competence level, the following are the methods to be used for this assessment:   * ..................................................... * ..................................................... | √ |  |  |
| To be declared competent on **Demonstrate an understanding of creating multimedia/web-based computer applications with scripting** module (formative assessment), you should have obtained at least 80% of the total mark of this assessment. | √ |  |  |
| You will be provided with detailed feedback on your performance of this assessment as follows:   * Written Feedback * Verbal Feedback | √ |  |  |
| Should you be declared “not yet competent” on this assessment, you will be entitled for re-assessment opportunity/ies. | √ |  |  |
| You will be required to re-submit evidence (only for areas) you were declared not yet competent. A date for re-submission will be agreed with the assessor. | √ |  |  |
| You will be entitled to lodge an appeal should you not be satisfied with the assessment decision of your assessment. | √ |  |  |
| You will be required to provide the assessor feedback on assessment procedure – this is to assist in improving the assessment practices. | √ |  |  |
| Your results of assessment and portfolio of evidence information will not be provided to any person without your written consent. | √ |  |  |

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| **Learner’s Declaration** | | | |
| I MM Ngewu herewith declare that I am ready for the assessment, that we have reviewed the assessment preparation and plan, I understand the assessment process and I am happy that the assessment will be conducted in a fair manner. | | | |
| **Learner Signature:** | **Date:** | **Facilitator Signature:** | **Date:** |
|  | **02 / 10 /2023** |  | **02 / 10 / 2023** |

Learning Unit1

**UNIT STANDARD NUMBER :** 14933

**LEVEL ON THE NQF :** 4

**CREDITS :** 6

**FIELD :** Services

**SUB FIELD :** Transport, Operations and Logistics

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| **PURPOSE:** | * This unit standard is intended for individuals who need to create, test and gain user approval for multimedia/web-based computer applications with scripting from an outlined brief of the application. * People credited with this unit standard are able to: * plan the use of a multimedia/web-based authoring computer application with scripting; * design a multimedia/web-based application; * identify and save text, graphic elements and animation to be included in the multimedia/web-based application; * create multimedia/web-based application scripts; and * assemble a multimedia/web-based application including scripts. * The performance of all elements is to a standard that allows further learning in this area |
| **LEARNING ASSUMED TO BE IN PLACE:** | |
| **Description of required skills, knowledge and understanding on:**  **Producing computer graphics using base functions**  **Automate computer processes in an application using a macro facility. .** | |

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| **SESSION 1.**  **Plan the use of a multimedia/web-based authoring computer application with scripting.** |
| **Learning Outcomes** |
| * 1. The user-specified topic, purpose, target audience and objectives of the application are identified according to agreed development plan. * 2. The tools selected to create multimedia/web-based computer applications with scripting is justified in relation to the agreed development plan * 3. The hardware and software required to create and run the application is identified according to the agreed development plan. * 4. The plan for the creation of a multimedia/web-based computer application is outlined and monitored according to project planning principles and financial requirements. * 5. The configuration of the computer and associated systems necessary for the creation of the application are identified according to the agreed development plan. |

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| **Activity** | **Questions Description** | **Mark** |
| **1** | **In groups discuss how to plan the use of a multimedia/web-based authoring computer application with scripting.** | **10** |

Many multimedia websites contain interactive elements with which user participates

directly, such as to control the delivery of a sound or video clip, manipulate a 3D

object or play a game. Like other types of web pages, multimedia web pages

utilize hyperlinks for interactivity, the information presented is determined by the

hyperlinks clicked by the visitor.

Using multimedia is that it can fit a variety of learning styles. Some people are visual

learners, who learn best by seeing, others are auditory learners w ho learn best by

hearing. Still others are kinesthetic learners who learn best by doing. When a single

medium is used, although it may be appropriate for some users, other users may be

missing out on the full experience simply because the application does not match

their styles. Multimedia has the advantage of presenting the material in multiple

learning style w hic helps to alleviate this problem.

For example, an interactive web-based exercise the uses printed text , images, spoken

narration and activities that the user performs covers the three types of learning

styles jut discussed.

Using multimedia it often makes the presented material more interesting and

enjoyable, and many ideas are easier to convey in multimedia format. For example

compare listening to the news on the radio to watching the news on TV. The

addition of the visual image of the newscaster combined with video clips,

photographs and other graphics typically used on TV a more informative experience

for most individuals than listening to a radio news broadcast.

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| **SESSION 2.**  **Design a multimedia/web-based computer application.** |
| **Learning Outcomes** |
| * 1. Multimedia/web-based application design is generated according to the user specifications of the multimedia/web-based application.Range: The multimedia/web-based application refers to the user specifications for the topic, purpose, target audience and objectives. * 2. Story-board and flow-diagram of the multimedia/web-based computer application is designed to ensure effective communication between developer and user understanding. * 3. The multimedia/web-based computer application is designed according to effective communication for multimedia/web-based in the application principles. |

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| **Activity** | **Questions Description** | **Mark** |
| **2** | **In groups discuss how you would design a multimedia/web-based computer application** | **10** |

Web site design refers to the process of planning what your website will look like and

how will it work. Time spent planning and designing a site on a paper before jumping

into the development process pays off in the long run. When designing a

multimedia website, it is important to keep two basic principles in mind:

1. Users like interesting and exciting applications.

2. Users have little patience with slow-to-load or hard-to-use.

Another factor that impacts the design of a web site is the device that your target

audience will use to access the site. Since it can vary from a large TV screen to a

load 17-inch desktop PC with a 2-inch screen to a smart phone, obviously a one size

fits all web site is not an acceptable option. At a minimum one should early on

whether the website will be used for conventional PCs , whether the site will be

designed for handheld or portable device use or whether content will be optimized

for multiple delivery methods. Even if a single delivery method is assumed, there are

still many variations of platforms. Web browsers and settings that can be used by

web page visitors. Because of this, it is important to set up the site so it can be used

on as many different PC configurations as possible. Careful considerations should be

given to:

• Features that require a specific browser. Including snazzy animated effects for

internet explorer users might be nice for them but ignores other users.

• Features that require little used plug-ins. Although it is annoying to have to

download a plug-in before being able to use a web page feature, most users

tolerate downloading a few of the most widely used plug-ins, the first time

they are needed, if they dont have them already installed.

• The size of the page content. Keep in mind that different browsers and

screen resolutions allow different amounts of room to display web page text.

This affects how wide your images and columns of text should be. To ensure

that the content is visible on virtually PCs with a maximized browser window

and a screen resolution of 800 \* 600 or higher without the user having to scroll

down unnecessarily, keep banner images, image maps and other full-width

items.

• High-bandwidth items. Although broadband internet use is growing , there is

still a huge installed base of dial-up modem users. If the intended audience of

your site includes a large number of dial-up users pay extra close attention to

the size of the images on the site, and use techniques to allow the user to

decide whether to take the time to access certain features of the site.

Using flowcharts, Page layouts and Storyboards

After the intended audience, objectives and basic content to be included in a web

site have been determined, the structure and layout of the site can be designed. A

flowchart when used with the design of a w eb site relate to one another.

Navigational design consideration

careful design of your navigational structure is extremely important. After drawing a

preliminary flowchart of a site or application, take a look at the balance of the

flowchart.

Access Considerations

When designing a multimedia web site, two types of access considerations should

be kept in mind: compatibility with the various types of devices that may be used to

access the site and functionality for users with physical disabilities.

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| **SESSION 3.**  **Identify and save text, graphic elements and animation** |
| **Learning Outcomes** |
| * 1. Multimedia/web-based application text is used to align with agreed topic, purpose and target audience for the application and South African copyright and privacy laws. * 2. Graphic elements and animation are identified and saved according to agreed design specification and South African copyright and privacy laws. * 3. The text, graphic elements and animation are saved in a form that allows them to be integrated into the multimedia/web-based application. |

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| **Activity** | **Questions Description** | **Mark** |
| **3** | **In groups Identify different multimedia elements** | **15** |

**Text**

Text is an important part of most websites. It is used to supply basic content, as well as to add text-based menus and hyperlinks. It is also frequently added to buttons, logos and banners, and other web page graphics. Text can be displayed in a variety of typefaces, colors, sizes and appearances. A typeface is a collection of text characters that share a common design such as Times new roman, Arial, Cooper black and Dom casual typefaces. When a consistent text appearance is required on a web site, such as for a company logo or navigation buttons, a graphical images used instead. Unlike regular text, text that is incorporated into an is image displayed the same on all computers, regardless of the user's browser settings because the text is part of the displayed image's file.

**Graphics**

Graphics or images refer to digital representations of photographs, drawings, charts, and other visual images. Unlike animation or video, graphics are unmoving static images. Graphics can be created by scanning a photograph or document, taking a picture w ith a digital camera or creating or modifying an image in an image editing program. They can also be obtained as clip art or stock photograph images. Clip photograph consists of premade electronic images. And Stock photographs available for use on wen pages and other types of documents; some are royalty free, others have more restrictive usage requirement. Graphics are available in many formats such as TIF, BMP, GIF, JPEG and PNG. TI F format is commonly used with scanned images and the BMP format is used by windows paint and similar graphics programs. Web page images are usually saved in either the GIF, JPEG or PNG format. **Animation**

Is the term used to describe a series of graphical images that are displayed one after the other to stimulate movement. Cartoons on television are one example of animation, animating objects on web pages so they move or change their

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| **SESSION 4.**  **Create multimedia/web-based computer application scripts.** |
| **Learning Outcomes** |
| * 1. A logic diagram of the scripts is demonstrated in the specified outcome * 2. The operating environment of the computer and associated applications and software are configured so that it may be used as outlined in the plan. * 3. The script is written using standard features of the scripting language. * 4. The scripts are tested, errors identified and corrected through most likely conditions. |

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| **Activity** | **Questions Description** | **Mark** |
| **4** | **In groups discuss how you would create multimedia/web-based computer application scripts.** | **10** |

Once a web site has been carefully designed, it is time to create it. This process is

called web site development. The development of a website can be performed in-

house or it can be outsourced to a professional web developer. I n either case the

development process of a multimedia web site includes three basic steps;

• Creating the multimedia elements.

• creating the website.

• Testing and maintaining the site.

Creating the multimedia elements

Before the actual web pages are created, it is a good idea to create all the

individual multimedia elements that will be used in the site. To accomplish, typically

several different programs are used, such as graphics software to create or modify

images, animation software to create animated elements and the audio editing

and video editing software to create finished sound and video clips.

Most web pages today are written in a mark-up language, a coding system is used

to define the structure, layout and general appearance of the content of a web

page. When a mark-up language is used, mark-up tags are inserted around the web

page content to identify where elements are to be displayed and their general

appearance. JavaScript and other scripting languages can be used to add

dynamic content to a web page and web site authoring software is frequently used

to create an entire site, typing together all the marked up web pages, scripts and

multimedia contained within a site.

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| **SESSION 5.**  **Assemble a multimedia/web-based application including scripts.** |
| **Learning Outcomes** |
| * 1. The multimedia/web-based application is assembled using the saved text, graphics and animation, written application scripts and planned specification and user requirement. * 2. The function and content of the application are consistent with the design specification and specified computer system environment. |

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| **Activity** | **Questions Description** | **Mark** |
| **5** | **In pairs discuss the future of web-based multimedia** | **5** |

Although no one knows exactly what types of multimedia will be available in the

future, it is safe bet that it will be even more exciting and more embedded into

everyday events than at present. New types of multimedia will likely be developed

to fit our growing need for mobile content and as internet users continue to move to

broadband, except to see multimedia web sites and television merge even more

closely together. Game boxes already have some internet and multimedia

capabilities built-in and interactive TV v ideo-on-demand may soon be the norm.

In the future multimedia will likely be even more common place and integrated into

our everyday lives. Trends such as the convergence of TV and the internet will lead

us in that direction. How fast this evolves depends, in part on how soon fast home

broadband internet access becomes the norm.

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| **SELF-ASSESSMENT** |

The learner must make use of the following self-evaluation checklist to rate himself against the learning outcomes of this particular training module in establishing the level of mastery of the information.

1. Not able to comply

2. Reasonable compliance (Not acceptable for final evaluation)

3. Able to comply fully

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| **LEARNING OUTCOMES** | | **1** | **2** | **3** |
| **1** |  |  |  |  |
| **2** |  |  |  |  |
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**Learner Signature Date**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_02/10/2023\_\_\_\_**

**Facilitators’ Signature Date**

**ASSESSMENT FEEDBACK REPORT**

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| **FACILITATOR FEEDBACK & REMARKS** |
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| **ASSESSMENT JUDGEMENT** |
| **Learner’s Total Mark: Requirements met Requirements not met** |
| **Action/s required:**  **By when:** |

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| **LEARNER FEEDBACK & COMMENTS** |
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| **DECLARATION BY THE FACILITATOR** |
| I ……………………………………………............. (Facilitator) hereby certify that I have examined the learner workbook and I am satisfied with the evidence provided by the learner. |

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| **DECLARATION BY LEARNER** | |
| I, Mila Mihlali Ngewu declare that I am satisfied that the feedback given to me by the Facilitator was relevant, sufficient and done in a constructive manner. I accept the assessment judgment and have no further questions relating to this particular assessment event. | |
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| **Learner Date** | **Facilitator Date** |

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| **DECLARATION BY THE ASSESSOR** | |
| I ……………………………………………............. (Assessor) hereby certify that I have examined the learner workbook and I am satisfied with the Facilitator Judgment of this assessment. | |
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| **Assessor Date** | **Moderator Date** |