**Summative Assessment - Modules 3 & 4**

*Hello and welcome to the assessment. Here you’ll prove to the world just how much you know and understand about what you’ve just learnt in the learner guides. This is an important part of your time at Umuzi because once this is done, you’ll be certified! So please, take this time to learn everything you can! Take a look at some pointers below with regard to answering the questions…*

* *Be specific*
* *Write professionally - no shorthand!*
* *Your answers must be original and come from your brain and your brain only.*
* *No copy/paste tricks! Our markers have seen it all and will know if you’re taking shortcuts.*
* *Remember, sloppy or poor work will be sent back to you to do again, so do it properly the first time and you’ll be done in no time.*
* *Ask for help at any time. Ask your friends, a manager, anybody!!*
* *Don’t skip any questions! You must do them all!*
* *You’ll see two boxes after each question - one for your answer and one for the marker’s comments. DO NOT delete the marker’s comments if you are required to resubmit your work after the first attempt. Should you have to do it again you will see a new box* ***under*** *the marker’s comments, so fill that one out in* ***BLUE****. Remember!! It’s not the end of the world if you have to resubmit. You’re here to learn, so don’t beat yourself up if you don’t get it right on the first go. Obviously, try your best to get it right on the first attempt, but if not, you have another chance to do it properly!*

*Ok, and that’s that! Time to get to it! Good luck, have fun and enjoy! :)*

**Enter your name and surname below**

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| **Luvo Spofana** |

**1.** **Give a brief description of VoIP and how it works (07)**

**Your answer below**

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| Voice over Internet Protocol refers to the standards that facilitate voice-based phone calls using an internet connection instead of a local telephone company. This technology works by converting one’s voice into a digital signal, compresses it, and sends it over the internet. On the receiving end, the digital data is then uncompressed into the sound that one hears through their audio output device. VoIP allows people to make phone calls without any telephone service, saving them large sums of money of charges for long-distance calls.  A VoIP server is used to connect calls to other telephone networks. Voice over Internet Protocol system uses a high-speed internet connection and transmits audio by converting analog voice signals into digital signals over one’s broadband connection.  Since VoIP runs over the internet, your data is stored securely in the cloud. You can manage the VoIP system through an online dashboard. This dashboard allows users to adjust contacts, business phone numbers, call forwarding, and add new phone numbers. |

**Marker’s Comments**

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**2. List 6 ways that businesses use the web to improve their business. (08)**

**Your answer below**

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| * **Create and augment your brand:** It is easy and affordable to define your image on the Internet, whether you are a one-person company or a large corporation. The costs of creating an online presence are far less than creating a physical one. * **Reach a global audience:** The Internet is a worldwide network allowing you to reach people even very expensive advertising could not. This makes setting up a business a more attractive prospect as you are no longer confined to a local physical market. * **Communicate more efficiently and regularly:** Social media platforms and email communication means you can keep in more direct and constant contact with existing and potential customers; this communication might be new product information, sales, or general company news. Moreover, with the vast information we can now gather about users and their online behaviour businesses can take advantage of targeted online advertising. * **Provide product information:** Give customers instant and direct access to information about your products and services. This creates paying customers more quickly and also saves significantly on print and mail costs. * **eCommerce**: Sell your products online through a retail web store that allows digital payments. This makes shopping easier for customers and reduces costs for businesses. * **Provide your service online**: Many products and services are now digital and accessed online. The online game you are creating is a good example of this as well as the web applications we talked about previously that were created purely for use on the internet. However, there are also industries that are moving online. For example, the music industry faces competition from online platforms like Spotify, Apple Music, and Google Play. |

**Marker’s Comments**

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**3. Explain two principles of user-friendly web design. (08)**

**Your answer below**

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| Navigation – The website’s architecture, menus and other navigation tools must be designed with the goal of helping the site’s visitors to navigate through the site with ease and be able to find the information they require efficiently.  Don’t make users think – The website should be easy to use, direct and self-explanatory so that it can provide a nice experience to the user. Users shouldn’t have to guess what certain buttons do, nor should they extensively search just to find what they’re looking for, the website should be straight-forward. |

**Marker’s Comments**

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**5. Describe ways to provide customer support for an eCommerce/online business site (09)**

**Your answer below**

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| Provide a customer service phone number – A phone call is a one of the best ways for customers to contact your business and make enquiries. It is important that the business’ phone number is included on the website and is easy for customers to find to call and enquire. It is also important to have enough staff members assigned to answering phone calls and providing customer support services to your customers.  Provide a customer service email – Some customers just personally prefer sending emails for communicating with the business and making enquiries, so it is just as important to also have your business email address for customer support services visible and easy to find on your website, along with a separate department of staff that is assigned to respond to customers’ emails whether it’s general enquiries or issues faced with the site/product. |

**Marker’s Comments**

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**6. What questions should you ask yourself when estimating the total cost of a project? (10)**

**Your answer below**

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| 1. How much effort is required to complete each activity? 2. How much calendar time is needed to complete each activity? 3. What is the total cost of each activity? |

**Marker’s Comments**

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**7. What is the purpose of the daily stand-up (daily scrum) meeting in Agile project management? (11)**

**Your answer below**

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| The purpose of a daily stand-up meeting is to learn the current progress of every team member that works on Scrum tasks. Daily stand-up meetings are used to align team members around company goals and let them address any short-term challenges that prevent team members from effectively performing their sprint tasks. |

**Marker’s Comments**

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**8. List the 7 main types of logic gates (12)**

**Your answer below**

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| * **AND:** The AND gate takes two or more inputs and returns a positive output if both inputs are positive. * **OR:** The OR gate takes two or more inputs and returns a positive output if one of the inputs is true. * **NAND:** NAND stands for ‘NOT AND’ and this gate takes the output returned by the AND gate as input and inverts the output. * **NOR:** NOR stands for ‘NOT OR’ and this gate takes the output returned by the OR gate as input and inverts the output. * **NOT:** The NOT gate returns the inversion/opposite of the given input. * **EOR:** EOR stands for ‘Exclusive OR’ and this gate takes in two inputs and returns a positive input if only one of the inputs is positive. * **ENOR:** The ‘Exclusive NOT OR’ gate takes in two inputs that is positive at the EOR gate and inverts the output. |

**Marker’s Comments**

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