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| **FURTHER EDUCATION AND TRAINING CERTIFICATE: INFORMATION TECHNOLOGY: SYSTEMS DEVELOPMENT**  **ID 78965 LEVEL 4 – CREDITS 165** |
| **SUMMATIVE ASSESEMENT**  **DESCRIBE THE DIFFERENCE BETWEEN PROGRAMMING IN OBJECT ORIENTATED AND PROCEDURAL LANGUAGES** |

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| **FULL NAME & SURNAME** | Mila Mihlali Ngewu |
| **ID NUMBER:** | 9909106615084 |
| **NAME OF ASSESSOR** | Anneline Nomkeko |
| **DATE OF ASSESSMENT** | 12/09/2023 |
| **VENUE** | NMB iHUB |

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|  | **ACHIEVED** | **NOT ACHIEVED** |
| **KNOWLEDGE** |  |  |
| **SKILLS** |  |  |

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| **Signature of learner** | **Signature of Assessor** |

**ASSESSMENT PACK**

**Please complete the following sections (A and B) before commencing with this assessment. The moderator of this assessment will complete section C.**

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| **Section A Learner Information** | | | | | | | | | | | | | | | | |
| **Name:** | | | | | | |  | | | | | | | | | |
| **Surname:** | | | | | | |  | | | | | | | | | |
| **Date:** | | | | | | |  | | | | | | | | | |
| **Contact telephone no:** | | | | | | |  | | | | | | | | | |
| **Learnership agreement no:** | | | | | | |  | | | | | | | | | |
| **Company:** | | | | | | | **Site:** | | | | | | | | | |
| **ID** |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |

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| **Section B Assessor Information** | | | | | | | | | | | | | | | | |
| **Name:** | | | | | | |  | | | | | | | | | |
| **Surname:** | | | | | | |  | | | | | | | | | |
| **Date:** | | | | | | |  | | | | | | | | | |
| **Contact telephone no:** | | | | | | |  | | | | | | | | | |
| **Assessor no:** | | | | | | |  | | | | | | | | | |
| **Provider no:** | | | | | | | **Site:** | | | | | | | | | |
| **ID** |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |

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| **Section C Moderator Information** | | | | | | | | | | | | | | | | |
| **Name:** | | | | | | |  | | | | | | | | | |
| **Surname:** | | | | | | |  | | | | | | | | | |
| **Date:** | | | | | | |  | | | | | | | | | |
| **Contact telephone no:** | | | | | | |  | | | | | | | | | |
| **Moderator no:** | | | | | | |  | | | | | | | | | |
| **Provider no:** | | | | | | | **Site:** | | | | | | | | | |
| **ID** |  |  |  |  |  |  | |  |  |  |  |  |  |  |  |  |

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| **Results:** |
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| PART ONE |

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| Assessors Guide |

**1. INSTRUCTIONS TO ASSESSOR**

**Introduction:**

This assessment guide has been designed as a generic assessment guide and is intended for use by the accredited Training Providers.

**Purpose of the assessment**

The purpose of summative assessment against this unit standard is to:

♦ Award credits to the NQF to learners who are able to start and run their businesses.

**Learning assumptions**

The following knowledge, skills, attitude and/or equivalent:

♦ Demonstrate knowledge of communication and numeracy at Abet Level 3

**Assessment methods**

The following assessment methods will be used for the summative assessments:

♦ written and/or/verbal questioning

♦ Product sample and on site assessment

**2. Assessment Process**

**General**

* Use the assessment guide and your latest company policies and standard operating procedures to assess the evidence received from the learner.
* Use the section: Addition Comments/Questions to note down any further comments or questions on the evidence assessed.
* Use the model answers as a guideline to assess the learner’s answers to the assessment questionnaire.
* The learner can complete the assessment questionnaire orally. In this case, agree a date, time and venue.
* Provide the learner with a feedback within 10 working days of receiving the evidence.

**Step 1 - Planning for the Assessment**

Review this assessment guide to:

* Ensure that you understand all the requirements of the assessment in terms of evidence required to prove competence.
* Identify and prepare the learner for the assessment by:
  + Completing the Assessment Plan with the learner to discuss and agree the details regarding the assessment.
  + Completing the Assessment Preparation Checklist and getting the learner to sign.
* Ensure that you have familiarized yourself with the following:
  + The various patrolling functions and standard operating procedures within the company.

**Step 2: Complete the Assessment**

* Collect the evidence in accordance with the methods and evidence requirements specified.
* Mark each question as correct or incorrect in the “Office Use” column.
* Record the evidence on the assessment guide and indicate “Competent”, “Not Yet Competent” or “Not Assessed” for each assessment criterion. Note down any comments at the back of the assessment guide.
* Ask the learner additional questions, if necessary, to clarify points. Record these on the guide.
* All questions must be complete as per the criteria specified.
* Answers provided must be similar to the model answers.

**Step 3 - After the Assessment**

* Prepare the feedback by writing comprehensive, developmental feedback after each section on the Assignment Sheets. In addition to this, you are required to write a summary overall feedback on the Assessment Guide.
* Provide the feedback to the learner in a safe, undisturbed in nature.
* Ensure that your feedback is developmental and supportive in nature.
* Advise the learner on what action to follow in the event of a “Not Yet Competent” rating.
* Advise the learner on what action to take where he/she feels the need to appeal against your decision.
* Allow the learner time to provide you with feedback relevant to the process.
* Record the learner’s feedback in the guide and ensure that it is given to the person responsible for the quality assurance of assessment tools.
* Ensure that the learner co-signs the assessment guide to indicate agreement with the feedback.

**3. Assessment documentation required:**

**Step 1: Planning for the Assessment**

♦ Assessment Plan

♦ Assessment Preparation Checklist

♦ Assessment Policy (including Appeals)

♦ Evidence Matrix

♦ Assessment Instruments

**Step 2: Conducting the Assessment**

♦ Assessor Guide

♦ Learner’s workbook

♦ Summative assessment pack

**Step 3: After the Assessment**

♦ Assessment Comments

♦ Feedback Report

**4. Specific Instructions**

Please note that Part 3 Assessment Instruments are not included in this guide and are to be included by the assessor on an individual basis.

The actual summative assessments need to be completed and signed off by both learner and assessor. The assessor will take control of the completed assessment instruments and will file them under the tab for Assessment Evidence.

The completed assessment pack will be kept in safekeeping at the training provider for three months after endorsement by SETA and will then be returned to the learner.

**Guidelines where** a**n appeal is lodged**

* The normal appeal procedure prescribed by SETA and described by the provider’s Quality Management System will be followed.

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| PART TWO |

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| Assessment Planning |

**ASSESSMENT PLAN**

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| **ASSESSMENT DETAILS** | | | | | | | | | | | |
| **Date of Assessment** | | | | **Option 1** | **Option 2** | | | | **Option 3** | **Option 4** | |
| **12/09/2023** |  | | | |  |  | |
| **TIME OF ASSESSMENT** | | | | | | | | | | | |
| **Start:** | **12:30** | | | | | **End:** | | **16:30** | | | |
| **VENUE** | **NMB iHUB** | | | | | **Contact**  **person** | |  | | | |
| **LANGUAGE MEDIUM**  **METHOD OF** | | | | | | **English** | | | | | |
| **METHOD OF ASSESSMENT (please tick off the one to be used)** | | | | | | | | | | | |
| **OBSERVATION** | | | **ORAL** | | | | | **WRITTEN** | | | |
| **Simulation** | |  | **Knowledge test** | | | |  | **Knowledge test** | | |  |
| **Product** | |  | **Interview** | | | |  |  | | |  |

**PRE-ASSESSMENT MEETING CHECKLIST**

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| **ACTION** | **YES/NO** | **COMMENTS** |
| Set learner at ease; be friendly, polite and professional. | **Yes** |  |
| Explain to the learner and agree on the following issues.   1. The unit standard that will be assessed 2. Date, time, venue and process to be followed during the assessment. 3. Summative assessment tools to be used for the assessment. 4. The assessment plan 5. Purpose of assessment | **Yes** |  |
| Explain to the learner and agree on the role of all involved during the assessment process. | **Yes** |  |
| Identify possible barriers and or disabilities of the learner. | **Yes** |  |
| Explain the meaning and application of RPL. | **Yes** |  |
| Explain, discuss and provide one complete set of the Appeals process documentation. | **Yes** |  |
| Explain to the learner when final results will be available and how feedback will be provided. | **Yes** |  |
| Discuss previous assessment results if applicable. | **Yes** |  |

I, MM Ngewu (initials and surname of learner), DECLARE THE FOLLOWING:

A copy of the unit standard(s) involved has been given to me prior to this meeting. I know I will be assessed against the criteria, which have been set to the applicable unit standards. The criteria have been discussed with me, and the procedures and purpose of the assessment has been clearly explained to me.

I am well aware of the venue, date and time that I will be assessed. I consider the period of time given to me to prepare myself for the assessment to be fair.

I understand clearly that I have the right to appeal against any decision made by the assessor during the assessment of the evidence provided by me, and that I have free access to the appeals procedures attached to this assessment pack. I understand that I have the right to be accompanied by another person during all procedures, and that I have free access to the Training Division of SBV’S Health and Safety Procedures- filed at the offices.

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|  | **12/09/2023** |
| **Signature of learner** | **Date** |

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| PART THREE |

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| Assessment Evidence |

**Assessment Instruments**

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| **TAKE NOTE** |
| **The assessment instruments included in this assessment pack are all summative assessment instruments and are to be read in conjunction with the formative assessment instruments contained in the learner workbook. Both formative (workbook) and summative assessments are to be retained as part of the learner’s portfolio of evidence.** |

**A number of the assessment instruments contained in this assessment are workplace knowledge based questions. This means that you will arrange with the learner, a time that is suitable, during which the learner will complete each questions.**

**Complete the following activities according to the instructions provided**

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| **Activity** |  | **Mark** |
| **1** | **Describe and explain the basic principles of an object.** | **7** |

Objects are fundamental units that represent real-world entities or concepts in a program with the following principles:

**State (Attributes/Properties):**

State refers to the characteristics or attributes that describe an object. These attributes store data about the object.

For example, if we have a class representing a "Car," its attributes could include properties like "color," "make," "model," and "year."

**Behavior (Methods/Functions):**

Behavior defines what an object can do or how it can interact with other objects or the environment.

In OOP, behavior is implemented using methods, which are functions associated with an object's class.

For the "Car" class, methods might include behaviors like "start," "stop," and "accelerate."

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| **Activity** |  | **Mark** |
| **2** | **Describe and explain the basic principles of a class.** | **4** |

A class is a blueprint or template for creating objects. The basic principles of a class revolve around defining its structure and behavior. Here are some of the principles:

**Constructor:**

A constructor is a special method in a class that is called when an object of that class is created.

Constructors assist in the creation of things with preset qualities, an excellent example being a vehicle factory that uses a blueprint to generate cars with specific features.

**Encapsulation:**

Encapsulation is the concept of bundling an object's attributes (data) and methods (behavior) into a single unit, the class.

Your school or office bag is a good illustration because it's impossible to see what's inside the bag.

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| **Activity** |  | **Mark** |
| **3** | **Describe and explain the basic principles of inheritance.** | **5** |

Inheritance refers to the capability of defining a new class of objects that inherits from a parent class, allows a class to inherit properties and behaviors from another class. It has the following principles:

**Mutability:**

This means that once a class inherits from another class, it cannot be changed.

**Inheritance is Hierarchical:**

Classes can be organized in a hierarchy, where each class can have multiple parent classes and multiple child classes.

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| **Activity** |  | **Mark** |
| **4** | **Describe and explain the basic principles of information hiding and encapsulation** | **5** |

Information hiding is a principle that suggests that the internal details or implementation of a class or module should be hidden from the external world.

**Abstraction:**

It allows you to focus on what a class does rather than how it does it. Users of a class only need to know how to use its public interface without worrying about the underlying complexity.

**Modularity:**

Information hiding promotes modular design by isolating components and reducing dependencies. Changes to the internal implementation of a class should not affect other parts of the system that rely on its interface.

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| **Activity** |  | **Mark** |
| **5** | **Briefly distinguish between Procedural and Object Oriented Programming using practical examples** | **10** |

**Procedural Programming:**

Focus: Procedural programming focuses on procedures or functions. It is based on the idea of writing a sequence of procedures that are executed one after the other.

Data Handling: In procedural programming, data and functions are separate. Functions typically take data as input, process it, and return results.

Example: Let's say you're building a program to manage a library's book inventory. In procedural programming, you might have functions like addBook(), removeBook(), and searchBook(), each operating on data structures like arrays or lists of books.

**Object-Oriented Programming (OOP):**

Focus: OOP focuses on objects, which are instances of classes. It promotes bundling data (attributes) and behavior (methods) into objects.

Data Handling: In OOP, data and methods that operate on that data are encapsulated within objects. Objects communicate with each other by sending messages (calling methods).

Example: Using the same library inventory scenario, you might define a Book class with attributes like title, author, and publication\_year, along with methods for manipulating and querying books.

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| **ASSESSOR REPORT** |
| **ASSIGNMENT**  CANDIDATE NAME:  DATE OF FEEDBACK: |
| OVERALL ASSESSMENT DECISION:  I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the assessor, declare the candidate **Competent / Not Yet Competent** (circle relevant) on all the criteria within the assignment. |
| STRENGTHS: |
| WEAKNESSES: |
| LEARNER COMMENTS: |
| DEVELOPMENT PLAN: |
| CANDIDATE DECLARATION:  I Mila Ngewu, the candidate, declare that I have received feedback and been informed of my overall competence for the criteria within the assignment. |
| ASSESSOR SIGNATURE LEARNER SIGNATURE  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |