P1#yIS1

**DEPARTMENT OF BUSINESS, ADVANCED MANUFACTURING AND LOGISTICS**

ICT50120 Diploma of Information Technology

Assessment

**Learner**

**ICTPRG549 Apply intermediate object-oriented language skills**

Assessment Book

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**Department:** Business, Advanced Manufacturing and Logistics

**Course:** ICT50120 Diploma of Information Technology

**Unit of Competency:** ICTPRG549 Apply intermediate object-oriented language skills

P19#yIS1

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# Assessment Requirements

## Introduction

For this unit **ICTPRG549 Apply intermediate object-oriented language skills** you will receive the following assessment book:

1. Assessment Book – Assessment (this book)

To achieve competence, you must satisfactorily complete all assessment tasks in the assessment books. The full set of tasks will enable you to demonstrate the skills and knowledge required for each unit.

All assessment tasks adhere to the unit of competency requirements from the training package and the principles of assessment and rules of evidence as required by Standards for Registered Training Organisations (RTOs) 2015.

You will be given clear instructions for all tasks. The assessment tasks ensure that you can provide sufficient evidence to demonstrate competence in each unit. If you need any variation to the assessment, you can discuss this with your assessor. See Reasonable adjustment section below.

Assessment tasks are designed and managed to allow you to demonstrate your skills and knowledge and verify that all work is your own.

To ensure fairness, consistency and reliability when marking assessments, assessors will be provided with checklists of expected outcomes, behaviours and required answers.

### Resubmission

If you do not achieve a Satisfactory result for a task, you will be given the opportunity to be re- assessed and/or to provide additional evidence. You can be given multiple opportunities to resubmit or undertake an assessment task. The number of attempts will be limited by department resources and the end date of the unit/module. Arrangements will be made on an individual basis to ensure the process is valid, fair and reliable in line with the VET Assessment Policy and Procedures.

### Assessment appeals

If you are dissatisfied with the outcome of your assessment, discuss your concerns with the teacher/assessor and/or program leader. If the issue is not resolved, you may appeal the decision(s) by following the Complaints and Appeals process as outlined on the Melbourne Polytechnic Learner Portal.

### Reasonable adjustment

If you have a disability or long-term medical or mental health condition you can register with Melbourne Polytechnic Disability Support Services to develop a Disability Support Plan and access appropriate academic support.

You may also speak with teaching staff about other circumstances impacting your capacity to complete an evidence-based assessment and seek a reasonable adjustment. It is important to ensure the integrity of the assessment is maintained and the intent is not compromised. Reasonable adjustment may include but is not limited to extra time or extensions for assessments, an alternate assessment task, note-taking support or varying the venue.

### Safety

If for any reason you feel unsafe, you can stop participating in the assessment and inform your Assessor.

If at any time during the assessment process the Assessor considers that the safety of any person is at risk, they will **stop** the assessment immediately.

## Assessment Methods

The following assessments will be used to collect evidence of the knowledge and skills you have gained from your Learning Program. You will be required to demonstrate your ability to perform to the standard required in the workplace, as specified within the assessment task criteria as detailed below.

|  |  |  |
| --- | --- | --- |
| **Book** | **Task Number & Name** | **Assessment Method** |
| Assessment book  Knowledge | Assessment Task 1: Knowledge Questions | Written Questions |
| Assessment book  Practical | Assessment Task 2: Build a simple application | Project/Portfolio Observation |
| Assessment book  Practical | Assessment Task 3: Build an intermediate OOP application | Project/Portfolio Observation |

# Assessment Task 1: Knowledge

Questions

|  |  |
| --- | --- |
| Course code and  title | **ICT50120 Diploma of Information Technology** |
| Unit code and  title | **ICTPRG549 Apply intermediate object-oriented language skills** |
| Due date | ….. / ….. / …… |
| Resources required | Learner resource  Computer Access with Microphone & Video (optional) & Internet |
| Decision making  rules | To achieve an overall satisfactory result for this assessment task:   * All questions must be answered satisfactorily |
| Learner instructions | This task is a set of written questions.  For this task you will:   * Complete it individually. * Write answers to all questions. * Complete it in your own time and submit it by the due date. * Have time to read and review the assessment task in class. * Submit your answers electronically via Moodle, (or in hard copy to your assessor, including the signed cover sheet and   Learner declaration).  If you have any questions about the task or concerns about your ability to complete the task, please discuss this with your Assessor. |

## Knowledge Questions

|  |  |  |  |
| --- | --- | --- | --- |
| **1** | **Provide a brief description of the following data structures that can be applied in object-oriented language.**  (20-50 words). | | |
|  | ANSWER |  SATISFACTORY |  NOT SATISFACTORY |
| **Array data structure:**  **An array is a data structure used to store a collection of values of the same type. Each value in the array can be accessed through an integer subscript. For example: if a is an integer array, a[i] is the subscript in the array. is an integer of i. When declaring an array variable, you need to indicate the array type.** | | | |
| **List data structure:**  **Put a bunch of data in a specific container. This container is called a list. Each data is called an element. Each element has an index to represent its position in the list. The definition of a list in Python is as follows: a list is a built-in ordered, variable sequence. All elements of the list are placed in a pair of square brackets "[]" and separated by commas.** | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **2** | **Match the object-oriented programming concepts and programming requirements definition below to the correct option**   1. **Encapsulation** 2. **Abstraction** 3. **Inheritance** 4. **Polymorphism** | | | |
|  | DEFINITION | ANSWER | SATISFACTORY | NOT  SATISFACTORY |
| **1.** | **is the ability of one object to acquire**  **some/all properties of another object.** | Inheritance | ☐ | ☐ |
| **2.** | **is accomplished when each object maintains a private state, inside a class. Other objects cannot access this state directly, instead, they can only invoke a list of public functions. The object manages its own state via these functions and no other class can alter it**  **unless explicitly allowed.** | Encapsulation | ☐ | ☐ |
| **3.** | **is the ability of an object to take on**  **many forms** | Polymorphism | ☐ | ☐ |
| **4.** | **is the process of selecting data from a**  **larger pool to show only the relevant details to the object.** | Abstraction | ☐ | ☐ |

|  |  |  |  |
| --- | --- | --- | --- |
| **3** | **List 4 techniques you can adopt while building a GUI (graphical user interface) to ensure a user friendly application.** | | |
|  | ANSWER |  SATISFACTORY |  NOT SATISFACTORY |
| Use typography to create hierarchy and clarity.  Make sure the system communicates with what's going on.  Page layout should be purposeful.  Keep the interface simple. | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **4** | **Explain the importance and use of application documentation (such as software requirements specifications) in object oriented programming skills (OOPS)?**  (20-50 words) | | |
|  | ANSWER |  SATISFACTORY |  NOT SATISFACTORY |
| The existence of documentation helps to keep track of all aspects of the application, and it improves the quality of the software product. Its main focus is development, maintenance and knowledge transfer to other developers. Successful documentation will make information easily accessible, provide a limited number of user entry points, help new users learn quickly, simplify the product, and help reduce support costs. | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **5** | **Explain how you would resolve each of the following user/program generated error events.**  (20-50 words) | | |
|  | ANSWER |  SATISFACTORY |  NOT SATISFACTORY |
| © Melbourne Polytechnic 2021 | | According to the prompt, we can see that the cause of the program error is that the input value is not an integer, so in order to solve this problem and make the program run correctly, we need to replace the input value with an integer. | |
|  | | print(’10 more is {}.format))  print(‘Now we are done!!’) | |
|  | | Step 1: Are there any UiRobot/UiPath robot services in Windows Services? If yes, disable and restart the machine.  Step 2: Are there any files left where uiPath is installed? (Usually in the C:\Program Files\UiPath folder)? Yes, please remove it manually.  Step 3: Delete any localappdata\UiPath, programData\UiPath folders. | |

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|  |  |  |  |
| --- | --- | --- | --- |
| **6** | **Review the below system message.**    **Supply the code to correct this.**  (20-50 words) | | |
|  | ANSWER |  SATISFACTORY |  NOT SATISFACTORY |
| Num1=int(float(input(“Input the first number between 0 and 255, the calculated answer must not be above 255:”)) | | | |

## Assessment Task Summary - Task 1: Knowledge Questions

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **TRAINER/ASSESSOR TO COMPLETE THE FOLLOWING:**  **THE LEARNER:** | | | | | | YES | NO |
| 1. | Satisfactorily answered all questions | | | | |  |  |
| **FEEDBACK** | | | | | | | |
|  | | | | | | | |
| **OVERALL TASK RESULT** | | | | | | | |
| * Satisfactory * Not Satisfactory (resubmission required) – Due date: | | | | | | | |
| **DATE ASSESSMENT RETURNED** | | |  | | | | |
| **TRAINER/ASSESSOR NAME** | | |  | | | | |
| **TRAINER/ASSESSOR SIGNATURE** | | | X | | | | |
| **LEARNER DECLARATION: Please read, tick and sign below** | | | | | | | |
| * I, WangYiZhuo have been advised of the outcome of this assessment task.   PRINT NAME | | | | | | | |
| **LEARNER SIGNATURE** | | WangYizhuo | | **DATE** |  | | |