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| Level 5- Diploma in Information System | | |
| Title | Assessment 1(Term1- Programming Principle 1) | |
| Document Version | 1.0 | |
| Last updated | 19 December 2022 | |
| Graduate Profile Outcome | **GPO 5** - Produce technical documentation for a variety of applications and audiences using different media to enhance system development, usage, and maintenance.  **GPO 6** - Support the building and deployment of software systems to meet organizational requirements.  **GPO 9** - Apply the principles of software development to create simple working applications. | |
| Learning Outcome | 5.1 | Specifications, help documents and user instructions (3 Credits) |
|  | 6.4 | Testing – test plans, techniques, and concepts (black box, white box, boundary value) (3 Credits) |
|  | 9.1 | Programming concepts and tools (7 Credits)   * Number and Coding systems: * Creating a simple single module application. * Fundamental programming constructs and principles; syntax, logic, coding standards, debugging, and testing. * Tools - text editors and/or integrated development environments (IDEs), logic diagrams and/or pseudo code; accessing and reading technical documentation; |
|  | 9.2 | Awareness of procedural and object-oriented programming (1 Credit) |
|  | 9.3 | Principles of Implementation (user testing, deployment) (1 Credit) |
| Credits | 15 Credits | |
| Duration | 2 Days (3 Hours each) | |
| Assessor Name | Rashmi Munjal | |

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| Assessment Section | Marks  Possible |
| Part A: Task1(9.1, 9.2) | 20 |
| Part A: Task 2(9.1, 9.2) | 44 |
| Part B: Task 3(5.1,6.4, 9.1, 9.3) | 81 |
| **Total** | **145** |
| Grade A+=95-100%, A=90-94%, A-=85-89%, B+=80-84%, B=70-79%, B-=60-69%, C+=55-59%, C=50-54%, D=Below 50% |  |
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| **Learner Declaration Statement**  *Only sign if you agree to the Learner Declaration Before assessment and After assessment sections below* | | | |
| Learner Name | Connor Petford | Learner Signature |  |

Learner Instructions and Declaration

**Declaration Statement**

I have read, understood, and agreed on the following (refer to student handbook):

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| Before the assessment |  |
| Techtorium Assessment Conditions and Guidelines | The responsibilities of the learner |
| The assessment environment is safe and accessible | The responsibilities of the assessor |
| The Learning Outcomes that will be assessed | Options for re-assessment |
| This assessment is my own original work, unless otherwise specified | Your completed assessment paper is the property of Techtorium and should not be removed from the premises at any time. |
| I have acknowledged all sources of information used in the writing of this assignment by using the recognized in-text APA referencing standard using the latest version. All unpublished sources of information have been acknowledged. | I have not copied either partially or in full any work from any other learner or former learner of Techtorium or any other tertiary institution. I promise not to share this project in part or whole with any other learner at Techtorium or outside this campus |
| I make this declaration in full knowledge and understanding that, should it be found false, Techtorium may take disciplinary action. | I understand that Techtorium may make use of systems such as Turnitin.com to verify the originality of my work. |
| [Academic Fraud](https://www.nzqa.govt.nz/assets/Providers-and-partners/NZQA-Effective-practice-guide.pdf) is a serious issue and will compromise your ability to study at Techtorium. If there is any doubt in your mind, then you should:   * State that you have copied and pasted work from another source * Use APA referencing * Include a weblink to the original source * Ask your Assessor for clarity | |
| After the assessment |  |
| 1. During the assessment it was clear what I was expected to do | 1. The feedback I received enabled me to find ways of reaching the standard (if it was not reached during the assessment) |
| 1. I was treated fairly | 1. The feedback I received met my needs and expectations |
| Learner feedback – *Before and After Assessment*:  *Please provide feedback so we can improve our Assessment Process:* | |

**Learner Instructions**

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| **Overview**   1. If you have any questions, you can ask your assessor before you start the assessment. 2. If you have any unforeseen circumstances which may affect your performance during the assessment. Please speak to your assessor before you start the assessment. 3. If you wish to query the Assessor marking, then follow the appeal process stated in the Student Handbook 4. This assessment is to be submitted as a soft copy which will be saved to a location specified by the Assessor at the time of the assessment. 5. If you are referring to external work, you must use the appropriate referencing style APA version 7 [reference link](https://guides.unitec.ac.nz/apareferencing/webpages) or equivalent hyperlinks 6. If you are attaching any document, you must mention in the Proof of work that “document attached” with the specified name of the document. 7. The assessment will be completed in class during the scheduled time. 8. The product that you submit by the end of the allocated time for this assessment will be considered your last product for assessment. 9. You must complete this assessment on your own (individual work). 10. You are only allowed to use resources as prescribed by each task. 11. **This assessment will be conducted in 2 days (3 hours each). Part A will be released on day 1 and Part B will be released on day 2. Please note: Part B (Day 2) will not be available on day 1.**   **Technical Details**   1. Assessments will be given through Canvas and must be uploaded through Canvas. 2. Where applicable you must include clear screenshot evidence. Images must not be unreadable when zoomed in or out. 3. You must not modify any part of this document except the relevant sections in which you are expected to write or embed other documents.   **Success Criteria**   1. All work for this assessment must be original including any written work. See referencing section above if you have any doubts. 2. To pass this assessment you must reach a minimum of a C grade (50%) for each task. 3. Your submission will be assessed through Turnitin.com to check the authenticity, **IF** any fraud/duplicate is detected, necessary actions will be taken.   **Learner Resources**  You will have access to the following resources for this assessment:   1. Assessment Coversheet (This document) 2. Declaration from Learner (This document) 3. Learner Instructions (This document) 4. Your own Device |

# Part A

# Scenario

You have been contacted by the Manager of your company to work on Console Application for Time Zone Tech Limited to record the basic information of their employees. There is no need for a Database as well as any GUI (Graphical User Interface) to implement. They want to record their employee details such as first name, last name, age, address, and contact number. You have software development skills to create working console applications.

## Requirements

You need to apply the principles of software development to create a working console application with the following functionalities.

* Add the information of their employees.
* Delete the information of any employee.
* Update the record of any existing employee.
* Display the information of all employees.

# Task 1

**Outcome Mapping:**

**9.1 - Programming concepts and tools**

**9.2 - Awareness of procedural and object-oriented programming**

## Solution Requirements

**The following Solution Requirements will be calculated toward your final grade for this term. You MUST attempt all the SRs.**

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|  | Solution Requirement | Detail |
| SR1.1 | Prepare a document for the followings:   1. Explain your findings about the difference between Procedural and Object-Oriented Programming with examples (at least two). 2. Illustrate the need for the Number and Coding System by giving a scenario | Prepare a document with your findings and attach it along with the submission.  (Name your file as in the given format Assessment1\_SR1.1.docx) |
| Proof of work | | |

# Task 2

**Outcome Mapping:**

**9.1 - Programming concepts and tools**

**9.2 - Awareness of procedural and object-oriented programming**

## Solution Requirements

**The following Solution Requirements will be calculated toward your final grade for this term. You MUST attempt all the SRs.**

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|  | Solution Requirement | Detail |
| SR2.1 | Design the Landing page with the following requirements:   1. Title Name 2. Add a total of 4 options to the Landing page.  * Add information. * Update Information * Delete Information * Display Information | Screenshot of the code and the output |
| Proof of work | | |
| SR2.2 | Add the first name, last name, age, address, and contact number of the employee into the record using Function. | Screenshot of the code and the output |
| Proof of work | | |
| SR2.3 | Update the name of an existing employee using Function. | Screenshot of the code and the output |
| Proof of work | | |
| SR2.4 | Delete the name of an existing employee using Function. | Screenshot of the code and the output |
| Proof of work | | |
| SR2.5 | Display the information of all Employees | Screenshot of the code and the output |
| Proof of work | | |