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| **Qualification Details** | | | |
| **Training Package Code & Title** | **UEE– Electrotechnology Training Package (Release 6.0)** | | |
| **Qualification National Code &**  **Title** | **UEE40720 – Certificate IV in Electronics and**  **Communications** | **State code:** | **BFP4** |
| **UEE40120 – Certificate IV in**  **Computer Systems** | **BFL8** |
| **UEE50520 – Diploma of Electronics and**  **Communications Engineering** | **BFP5** |
| **UEE50120 – Diploma of**  **Computer Systems Engineering** | **BFQ6** |

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| **Student Name** |  | | |
| **Student Declaration** | I declare that the evidence submitted is my own work:  **………………………………………………………………………….** | | |
| **Assessors Name** |  | | |
| **Date Due** | Click here to enter a date. | **Date Received** | Click here to enter a date. |

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| **Units of Competency (UoC) detailed in this DAP | Week/Stage/Block/Cluster: Embedded Applications** | | | |
| **Unit Code &**  **Title** | UEECS0020 – Evaluate and modify object-oriented code programs  UEEIC0012 – Develop structured programs to control external devices | **State code** | OCA73  OCA08 |
| **Assessment Tool** | **AT1 Portfolio 1** *(Develop simple and challenging program)* | | |

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| **Assessment Decision** | Satisfactory | | | Not Yet Satisfactory | | |
| **Assessor Signature** |  | | **Date** | | Click here to enter a date. | |
| **Feedback to student** | | | | | | |
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| **Feedback from student** | | | | | | |
|  | | | | | | |
| **Student signature** | |  | **Date** | | |  |

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| **Assessment process instructions to Student:** |
| As the student you are required to:   1. You will be observed, and WHS (Work Health and Safety) protocols must be followed throughout the entire assessment. 2. Gather all the necessary tools, equipment, and technical information that will be required for these tasks. 3. If you're unclear about anything, ask your workplace supervisor (lecturer) for help. 4. Remember that the practical task isn't considered complete until your lecturer conducts a final inspection. This inspection ensures that your work meets the industry standards. 5. It's up to you to plan your work requirements and prioritize your actions effectively to meet workplace deadlines. 6. Leave the work area in a clean and organized state. At the end of the practical tasks, make sure to return all equipment to the designated storage area or as instructed. 7. If your performance is deemed unsatisfactory initially, you'll have the opportunity for a second attempt. Discuss the details of this second attempt with your lecturer, including a suitable date and time. 8. Adjustments to assessments may be made for you, providing the adjustments comply with set principles of assessment and rules of evidence If you require support for literacy and numeracy issues; support for hearing, sight or mobility issues; change to assessment times/venues; use of special or adaptive technology; considerations relating to age, gender & cultural beliefs; format of assessment materials; or presence of a scribe you need to inform your lecturer. Necessary adjustments can be discussed with the trainer prior to the commencement of the course. 9. **Additional Information:**  * WHS protocols will be observed for the entire assessment. * The attached checklist will be used to mark your assessment submission. Carefully read it before starting your assessments. * You must finish all the activities listed in the assessment. * Ensure you complete the "Debugging Table" (located at the end of the assessment sheet) with any problems or issues you encountered during the program development process**. This table cannot be left blank.** * This worksheet is intended to be completed during the lecture/lab whenever possible and submitted as a **single zip file or zipped file** via the Blackboard submission button before the due date. * While developing your programs at home, you may use the following tools. However, be prepared to present your work and explain your process to your lecturer:   + Python 3 web Interpreter   + Raspberry Pi Sense HAT Web Emulator   + W3School Python Reference   + Python Tutorial |

# **Introduction:**

*This assessment introduces you to understanding the use of operators, user input and literals. To deepen your understanding of Python you are required to attempt all activities and questions.*

**Student Checklist:**

Students are required to complete all the below activities within one-week (**PC1.3)PC1.4**.

|  |  |
| --- | --- |
| Tasks (WHS will be observed for the entire Assessment) **[PC1.1] (1.1/1.2) (2.1)** | Completed to Industry Standard. You will be required to demonstrate knowledge of established OHS procedures and best practices (e.g. safe handling practices) **(1.6)** |
| Finish Activity 1, 2, and 3 |  |
| Log for problems. Please Use the table (**Debugging Table**) at the end of the assessment. | **[PC2.4/ 2.5] PC (2.5) (2.6)**  **[PC 3.1/ 3.2/ 3.3] (3.1/3.2/3.3)** |

**ACTIVITY 1 TASK 1**

Write a program which obtains your first name and last name, then prints a pair of initials and explain the logic used in your program to your Lecturer. Document the program. **PE 1.2/1.3/1.4 /2.2**

**1.3/1.5/2.2/2.3/2.4/2.6**

**ACTIVITY 1 TASK 2**

Write a program which calculates the volume (in litres) of a six-pack of soda if each can is 350ml. Document the program

**PE 1.2/1.3/1.4 /2.2**

**1.3/1.5/2.2/2.3/2.4/2.6**

**ACTIVITY 1 TASK 3**

**a)** What are three (3) the WHS (Work Health and Safety) hazards of working with computers?

b) Name two (2) basic safety issues and safety measures that should be considered when using a computer? **PE 1.1**

**1.1/1.2**

**ACTIVITY 2 TASK 1**

These programs will challenge what you have learnt in last 4 weeks.

**You have to pseudocode or flow chart them before programming. Document the Program.**

**PE 1.3/1.5/2.2/2.3/2.4/2.6**

Write a program that prompts the user for two integers and then prints,

• The sum

• The difference

• The product

• The average

• The maximum (the larger of the two).

**ACTIVITY 2 TASK 2**

Write a program that prompts the user for a measurement in meters and then converts it to miles, feet, and inches. Document the program. **PE 1.3/1.5/2.2/2.3/2.4/2.6**

**You have to pseudocode or flow chart them before programming**.

**ACTIVITY 3 TASK 1**

Provide written responses to the questions below. Answers to these questions can be located in the corresponding topic presentation for this session. **PE 2.5/3.2**

What is problematic about the following statement sequence? How can you do it better?

userInput = input("Please enter the unit price: ")

unitPrice = int(userInput)

**ACTIVITY 3 TASK 2**

Write a program to get the first character of a string? The last character? The middle character (if the length is odd)? The middle two characters (if the length is even?). Document the program. **PE 1.6/2.5**

**ACTIVITY 4**

Log for problems. Please Use the (**Debugging Table**) for **Any problems, including errors and bugs when developing coding.**

**Table 1**

**Debugging Table (Must be filled)**

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| --- | --- | --- |
| **Any problems, including errors and bugs** | **Solutions** | **Date** |
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