**­Assessment Brief – Skills Demonstration 2**

**Course and Assessment Information**

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| **Module Title & Code** | Programming & Design Principles |
| **Code** | 5N2927 |
| **Internal Assessor** | Fiachra MacAllister |
| **Course/Class Group** | PU Comp |
| **Assessment Technique** | Skills Demonstration |
| **Issue Date** | 29/11/2023 |
| **Due Date** | 13/12/2023 |
| **Assessment Weighting** | 40% |
| **Title of Assessment** | Skills Demonstration |

**Learner Information**

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| **Learner Name** | Joshua Gill |
| **Learner Submission Date** | 12/12/23 |

**This brief is an explanation of what you must include in your submission. Please read it carefully.**

**Learner Guidelines: To complete this assessment, you will need to complete all tasks as indicated below.**

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| You are required to design and produce a computer program that performs a range of conversion functions. The program will perform conversions in the five measures listed below. The main menu will give the option of choosing one of the five or to quit the program.  When the user chooses a conversion option, he will be offered the facility to convert between two measurement systems in either direction, and also given the option of returning to the main menu. Your program code must use class and method calls to perform the conversions. The methods should include property decorator.  The measurement units that you should use are given in parenthesis.  You have been allocated to a team for the purpose of completing this assignment, and please note that 5 of the 40 marks for this assignment are for good team participation.  Distance (miles/kilometres)  Temperature (Celsius/Fahrenheit)  Volume (pints/litres)  Mass (kilogramme/stones)  Area (acres/hectares)  You are required to develop an algorithm using pseudocode that shows how you will solve the problem and to develop Python 3 code to implement your solution.  You are required to develop test data that tests the program and apply that test data to the coded solution. (Test your program by running it and performing all ten conversions.) You are required to use pytest or unit testing and must include this code and results as separate files with your assignment submission.  You should include your name and class as a comment at the top of your program code.  A supplementary marking scheme showing the breakdown of marks are provided for your guidance showing the required elements of the solution.  You are required to submit the following files:   * The algorithm in pseudocode; * Python 3 program code; * Data dictionary; (naming, type and purpose of data types chosen shown in excel file) * Screenshots of the running of your program incorporated into documents showing tests of the program; * Test files (pyTest or unit testing) * A brief document that describes the input of each member of your team to this assignment. Screenshots of correspondence between team members should be included in document. Try to keep this document short while providing evidence of both team discussions and individual effort. |

**Detailed Marking Scheme**

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| **Assessment Criteria:** | **Maximum**  **Mark** | **Student**  **Mark** |
| * Algorithm (8 marks)   + Top level algorithm with a suitably detailed algorithm for each task. (4)   + Complete data dictionary completed. | 4  4 |  |
| **Subtotal** | **8 Marks** |  |
| * Accurate Programming (16 marks)   + Program compiles. (2)   + Appropriate data types chosen for variables. (3)   + Correct use of functions (3)   + Correct and appropriate use of parameter passing (3)   + Correct and appropriate use of function returning a value. (3)   + Use of system defined function. (2) | 2  3  3  3  3  2 |  |
| **Subtotal** | **16 Marks** |  |
| * Appropriate Testing (6 marks)   + Suitable test data compiled. (2)   + All computation on test data shown. (2)   + Correct results shown for each piece of test data. (1)   + Screenshots included that show results of compiled test data used on coded solutions. (1) | 2  2  1  1 |  |
| **Subtotal** | **6 Marks** |  |
| * Accepted industry standards for coding (5 marks)   + Logical sequence to program. (1)   + Code suitably commented. (1)   + Indenting conforms to industry standard. (1)   + Clear and consistent input prompts given to user. (1)   + Clear and consistent output from the program, suitably displayed. (1) | 1  1  1  1  1 |  |
| **Subtotal** | **5 Marks** |  |
| * Evidence of good team participation (5 marks) * Evidence of each learner’s contribution | **5** |  |
| **Subtotal** | **5 Marks** |  |
| **Overall Total** | **40 Marks** |  |

**Assignment submission**

Create a folder named **‘Prog Skills Demo 1 Your Name’**, e.g., if your name is John Ford, your folder will be named **‘Prog Skills Demo 1 John Ford’**. You must save your work to that folder.

Upload the folder to your One Drive and share it with Fiachra MacAllister at fmacallister.dfe@lmetb.ie

**Note**: All grades/marks are **provisional** and may **change** during the results approval processes.

**Declaration of Original Work**

**If the work is not submitted via Moodle, please complete below.**

**This section MUST be signed by learners before submitting an assignment or other assessment evidence.**

All assignments and other material submitted by you for assessment must be your own work. In line with LMETB’s Assessment Malpractice Procedure, plagiarism or any other form of copying are not permitted.  Learners found copying from each other, directly from textbooks/websites or other sources etc. will be in breach of LMETB’s Assessment Malpractice Procedure.

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| I, Joshua Gill 12/12/23, confirm that all material submitted is my own work.  Signed: 12/12/23 Submission Date: Joshua Gill | |
| **Statement** | **Please Tick** |
| I declare all work presented in this portfolio is entirely my own and I have acknowledged sources of information as appropriate | ✅ |
| I understand that failure to comply with LMETB’s Assessment Malpractice policy relating to plagiarism constitutes a serious breach of conduct | ✅ |