**Learning Outcome:**

By the end of this practical, student will able to:

Construct a software application using the Python programming language (CLO1, P3, PLO3).

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| **CODE / COURSE** | **DFN40323 PROGRAMMING ESSENTIALS IN PYTHON** | **PRACTICAL TASK** | **1** |
| **PROGRAM / CLASS** | **DDT4** | **DURATION** | **3 HOURS** |
| **STUDENT’S NAME** | **1) TIVIYAEN ELANGO**  **2) MUHAMMAD AFIQ MUHAIMIN BIN MOHD ZAINI** | **CLO 1** | **P3** |
| **REG. NO.** | **1) 32DDT20F2015**  **2) 32DDT20F2029** | **TOTAL MARKS** | **/75** |
| **LECTURER’S NAME** | **SHARIZAN BINTI ABDUL JAMIL** |

**Instructions:**

Answer ALL the questions. Students are asked to discuss and upload the findings of the discussion in report and .py file through CIDOS. Discussions should be done in groups of 2 (two). Students will be assessed according to the Rubric included along with the questions.

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| **Question 1**  Write a program to display Body Mass Index (BMI) category as shown in **Table A1**. The calculation of BMI is based on the formula given. You need to get an input name, age, weight (in Kilogram) and height (in Meter) from the user.  **Table A1**   |  |  | | --- | --- | | **Category** | **BMI Range** | | Underweight | < 18.5 | | Normal | 18.5 – 24.9 | | Overweight | 25 – 30 | | Obese | > 30 | |

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| \*\*Formula:  **BMI = weight (Kg)**  **height(Meter)2**    Example Output:    **(25 marks)** |
| **SOURCE CODE & OUTPUT:**    **Underweight**    **Normal**    **Overweight**          **Obese** |
| **Question 2**  Write a program to calculate electricity bill based on the information given in **Table A2**. **Table A2**   |  |  |  |  | | --- | --- | --- | --- | | **Tariff Block (kWh)** | **Prorated Block (kWh)** | **Rate (RM)** | **Amount (RM)** | | 200 | 200 | 0.218 | 43.60 | | 100 | 100 | 0.334 | 33.40 | | 300 | 300 | 0.516 | 154.80 | | 300 | 130 | 0.546 | 70.98 | |

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| Example Output:    **(25 marks)** |
| **SOURCE CODE & OUTPUT:**    **730 units**    **900 units** |
| **Question 3**  Write a program to compute the car rental price. The program takes the input of days and selection of VIP membership. The program calculates and displays the rental price, discount, and final price of the car rental. The basic price of car rental is RM50 per day. The silver member gets 5% discount and gold member gets 10% discount of the total price. If the car is rented 3 days or more, 10% discount will apply. Display the receipt. (*Show the output for different membership*)    Example Output:    **(25 marks)** |
| **SOURCE CODE & OUTPUT:**    **Output** |
| **CONCLUSION:**  This exercise teaches us on how to use if statement properly and calculate multiple thing that we use in our daily life such as BMI, electric and car rental price  This also teaches us on how to properly think and solve the problem and implement it properly in code |