<u>**Network Programming (Python) – PBL Assignment (20%)**</u>

100 Mark

Problem statement:-

You are currently working in a company that use python as their primary programming language for every task. The project manager for your department is assigning everyone for different task as he wants to make the project more productive. You are given some tasks from your project manager, your tasks are as follow:-

1) You are required to write a program that have a several menu to choose from, the main menu of your program should look like this (You have to choose your own company name):- **(10 Mark)**

> Welcome to (company name)
>
> Please choose from the following option :-
>
> 1. CGPA Calculator
> 2. Name Manipulation
> 3. Data Extractor
> 4. (Create your own option based on chapter Dictionary)

2) Write the code for "**CGPA Calculator**" option. The program should allow user to enter as many GPA as they want, until the user hit "Finish", the program will output the total CGPA from the GPA that they enter. You should give the user 4 options which is to (write all options in separate functions):- **(20 Mark)**
   i. Get total CGPA of the student.
   ii. Count the total semester that the user has studied.
   iii. Calculate the next GPA that the student have to achieve to get CGPA of 3.0 (assuming the total CGPA that the user currently have is less than 3.0).

3) Write the code for "**Name Manipulation**" option. The program should prompt user to enter their name. The program should have several more options for the user to choose, you should have at least **5 options** for the user to choose (such as add another name to the existing name, change to lowercase and uppercase and so on, there are lots of String functions, be creative!).
   (20 Mark)

4) Write the code for "**Data Extractor**" option. This option should accept a file from the user (you have to create a file with lots of data in it), and from the file, the program should be able to do the following (user should be able to choose any of the option) :

(30 Marks)

    a. List of Male students
    b. List of Female students
    c. Total number of students in the list, and the total number of TTO in the list.
    d. List of students email address.

5) Write the code for chapter Dictionary (Be creative – Marks will be given based on creativity).

(20 Marks)

Note : All of the options should be written in different functions. Marks will be deducted if you write every section without using functions.

General Rules :- This PBL is a group PBL, **DO NOT** copy the codes directly from the internet/ChatGPT or copy from each other. If you get caught for **plagiarism**, you will get **ZERO mark** for your PBL.

Referencing :-

Make sure you reference anything that you get from the internet.

Submission Procedure :-

Please submit your report together with the name of your group members.

Prepared by :-

Mr. Mohammad Nadzir bin Nazuwan