## SCHOOL OF CHEMICAL AND ENERGY ENGINEERING UNIVERSITI TEKNOLOGI MALAYSIA

SECP 2273 PROGRAMMING FOR ENGINEERS
Project 2

Semester II 2021-2022
Due: 28<sup>th</sup> June 2022

This is NOT a group project. While discussion with other students is encouraged, all work submitted for credit, however, must be your own. Any evidence of plagiarism or other forms of scholastic dishonesty will be grounds for a failing grade in the course.

## **Problem Statement**

The middle to late period of the year 2021 was terrible for COVID-19 infections in Malaysia. Your task is to read the daily statistics of infection and death for July, August, and September and calculate the 5-day moving averages.

- i) Go to <a href="https://ourworldindata.org/coronavirus/country/malaysia">https://ourworldindata.org/coronavirus/country/malaysia</a> and download the full dataset in .csv format.
- ii) You may extract the relevant columns and data and save it in a separate .txt file to act as your input datafile.
- iii) Employ a user defined function to calculate the moving average. You may also have to use the Loop structure in your code.
- iv) Plot the daily data and the moving average on the same plot.
- v) Write the input data and calculated results in an output file with appropriate formatting and column arrangement.

## **Project report submission**

- 1. This project report must be presented in a standard technical report format. The content must include introduction, flowchart, results (program output) and discussion including program verification, and conclusion.
- 2. Fully commented source codes of the computer programs developed for the project must also be handed in. No mark will be given if the program softcopy is not submitted.
- 3. Report, code and relevant files must be zipped into a single file and submitted to the e-learning website.
- 4. Please include the following statement in the first page of the project submission. No mark will be given if this statement is not included.

I, *full name*, hereby declare that this project submission is a product of my own effort. I acknowledge that academic disciplinary action can be taken if this submission is a result of plagiarism or other form of scholastic dishonesty.

Yours Truly,

Your signature and date