FACULTY OF SCIENCE AND TECHNOLOG

COURSEWOR
BSC (HONS) TECHNOLOGY; BSC (HONS) COMPUTER SCIENCE; YE

ACADEMIC SI MESTER 3

PRG2214: Functional Programming Principles

Assignment 2

STUDENT NAME 1: _____

STUDENT NAME 2: _____

INSTRUCTIONS TO CANDIDATES

Answer **ALL** questions in pairs or alone.

This assignment will contribute 30% to your final grade.

All answers must be written in this one note page

IMPORTANT NOTES TO CANDIDATES

Student must remember to click on Turn In button in Microsoft Team

Assessing SLO: Use polymorphism and higher-order functions and demonstrate problem solving skill in Functional approach(C3, PLO2)

[This paper contains One questions printed on Three pages]

Question 1 (30 marks)

You are given the following dataset from https://github.com/MoH-Malaysia/covid19-public. Please refer to the attached deaths_state.csv.

Please write a P[illegible]answer the following questions:

1. Which [illegible]has the highest deaths due to Covid ?
2. What [illegible]n per day for Malaysia in the provided data ?
3. Which [illegible]e the lowest death in the provided data ?

The Program should display the answer for all the three questions above.

The description of data is shown in the following:

Deaths

1. date: yyyy-mm-dd format; data correct as of 1200hrs on that date
2. state: name of state (present in state file, but not country file)
3. deaths_new: deaths due to COVID-19 based on **date reported to public**
4. deaths_bid: deaths due to COVID-19 which were brought-in dead based on **date reported to public** (perfect subset of deaths_new)

5. deaths_new_dod: deaths due to COVID-19 based on **date of death**
6. deaths_bid_dod: deaths due to COVID-19 which were brought-in dead based on **date of death** (perfect subset of deaths_new_dod)

7. deaths_pvax: number of partially-vaccinated individuals who died due to COVID-19 based on **date of death** (perfect subset of deaths_new_dod), where "partially vaccinated" is defined as receiving at least 1 dose of a 2-dose vaccine at least 1 day prior to testing positive, or receiving the Cansino vaccine between 1-27 days before testing positive.
8. deaths_fvax: number of fully-vaccinated who died due to COVID-19 based on **date of death** (perfect subset of deaths_new_dod), where "fully vaccinated" is defined as receiving the 2nd dose of a 2-dose vaccine at least 14 days prior to testing positive, or receiving the Cansino vaccine at least 28 days before testing positive.
9. deaths_tat: median days between date of death and date of report for all deaths reported on the day

From <https://github.com/MoH-Malaysia/covid19-public/tree/main/epidemic>

Rubric:

MARGINAL (D)	ADEQUATE (C)	GOOD(B)	EXCELLENT(A)
D 14% of 30% **D- 12% of 30%**	**C 17 % of 30%** **C- 15 % of 30%**	**B + 20% of 30%** **B- 18% of 30%**	**A+ 30% of 30%** **A 25% of 30%** **A- 21% of 30%**
Evidence shows a minimal acceptable understanding of Function concept in Haskell.	of l ability to use them to solve problem with some error: Such as : Function Encapsulation Myriad	Illustrates a good mastery of the Haskell Function API. Able to demonstrate correct use of Haskell Function API, and evidence of proper use High order function. Use polymorphism in the Haskell code where appropriate.	As in good but provides further depth through either: Able to demonstrate ability to compose function to solve problem using Haskell functions with concise and accurate manner. **Demonstrated concise, efficient, reusable and modular code.**