Team Information

Team ID	T-16
Team Repo on GitHub	https://github.com/wilsonng-234/Team16.git

Name (Member 1)	Ng Chak Sang
GitHub ID	wilsonng-234
Email ID	csngae
Dev Branch	wilsonng-feature-A
Task Assignment	A
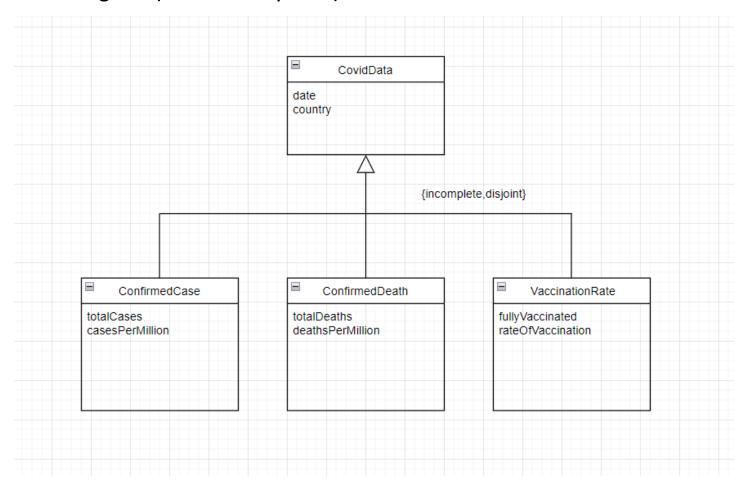
Name (Member 2)	Yuen Long Ho
GitHub ID	ShibuyaKanonUST
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Dev Branch	lhyuen-feature-B
Task Assignment	B

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Task Assignment	C
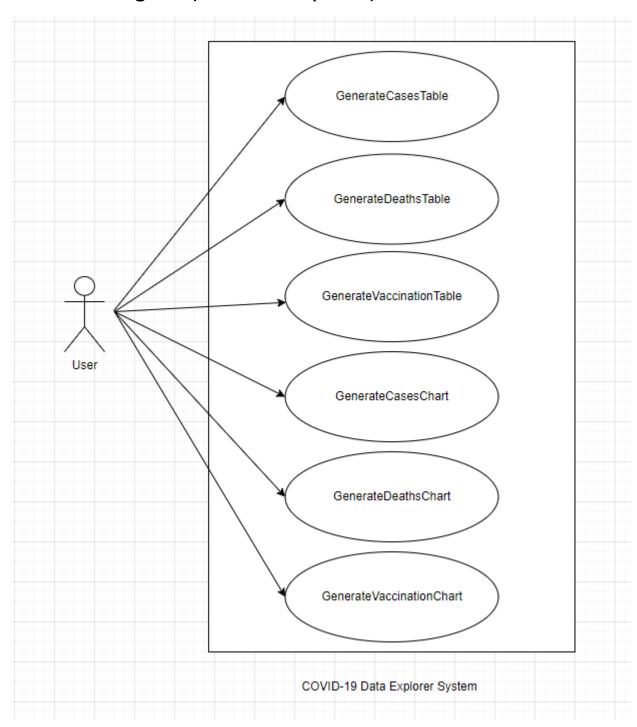
Submitted by: __Ng Chak Sang_____

Date of Submission: ___24/3/2022_____

Class Diagram (for overall system)

```
            ┌─────────────────────────┐
            │ ⊟    CovidData          │
            ├─────────────────────────┤
            │ date                    │
            │ country                 │
            │                         │
            └─────────────────────────┘
                       △
                       │          {incomplete,disjoint}
        ┌──────────────┼──────────────────────┐
        │              │                       │
┌───────────────┐ ┌───────────────┐ ┌───────────────┐
│⊟ ConfirmedCase│ │⊟ConfirmedDeath│ │⊟VaccinationRate│
├───────────────┤ ├───────────────┤ ├───────────────┤
│totalCases     │ │totalDeaths    │ │fullyVaccinated│
│casesPerMillion│ │deathsPerMillion│ │rateOfVaccination│
│               │ │               │ │               │
└───────────────┘ └───────────────┘ └───────────────┘
```

Use Case Diagram (for overall system)

GenerateCasesTable

GenerateDeathsTable

GenerateVaccinationTable

GenerateCasesChart

GenerateDeathsChart

GenerateVaccinationChart

User

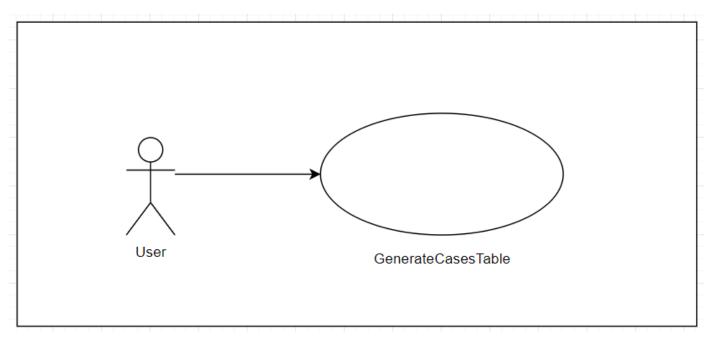COVID-19 Data Explorer System

Use Case Specification: Table-Generating Task (A1)

Use Case: GenerateCasesTable

Brief Description:

This use case describes how a user generate data table showing the number of confirmed COVID-19 cases by country and date of interest.

Use-Case Diagram

Basic Flow

1. The use case begins when the User actor chooses to generate data table showing the number of confirmed COVID-19 cases.
2. The system displays the interface for selecting countries and date of interest.

{Select Countries and Date of Interest}

3. The user indicates the countries and date of interest which he would like to enquire.

{Begin Generating Cases Table}

4. The user clicks "generate" button to generate the table.
5. The system retrieves data from the dataset and displays the table that showing "Total Number of Confirmed COVID-19 Cases" and "Number of Confirmed COVID-19 Cases Per Million" as of the date of interest by country.
6. The use case ends.

Alternative flow

A1: Invalid Input

At {Begin Generating Cases Table} if the selected countries or date of interest is invalid,

1. The system informs the user that the selected countries or date of interest is invalid.
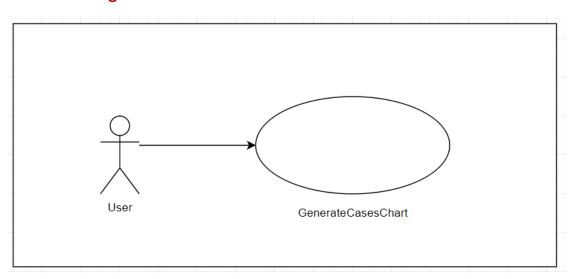2. The flow of events is resumed at {Select Countries and Date of Interest}.

Use Case Specification: Chart-Generating Task (A2)

Use Case: GenerateCasesChart

Brief Description:

This use case describes how a user generate data charts showing the cumulative confirmed COVID-19 cases per million by country and period of interest.

Use-Case Diagram

Basic Flow

1. The use case begins when the User actor chooses to generate data charts showing the cumulative confirmed COVID-19 cases per million.
2. The system displays the interface for selecting countries and period of interest.

{Select Countries and Period of Interest}

3. The user indicates the countries and period of interest which he would like to enquire.

{Begin Generating Cases Chart}

4. The user clicks "generate" button to generate the chart.

{Finish Generating Cases Chart}

5. The system retrieves data from the dataset and displays the chart that showing "Cumulative Confirmed COVID-19 Cases (per 1M)" in different countries by colored curves labelled with the corresponding country.
6. The use case ends.

Alternative flow

A1: Invalid Input

At {Begin Generating Cases Chart} if the selected countries or period of interest is invalid,

1. The system informs the user that the selected countries or period of interest is invalid.
2. The flow of events is resumed at {Select Countries and Period of Interest}.

A2: No Data Exists

At {Begin Generating Cases Chart} if "cumulative confirmed COVID-19 cases per million" data of the selected countries or period does not exist in the dataset,

1. The system informs the user that the data of which countries does not exist in the dataset.
2. Remove the countries that does not have the corresponding data from the list of interest.
3. The flow of events is resumed at {Finish Generating Cases Chart}.