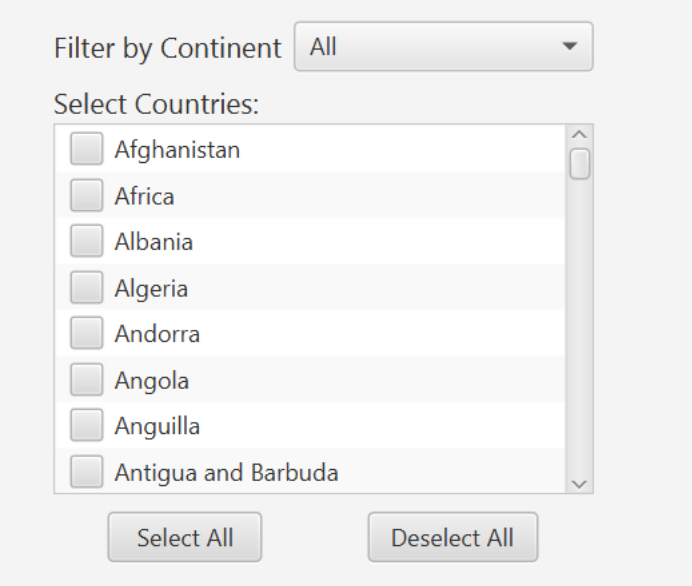
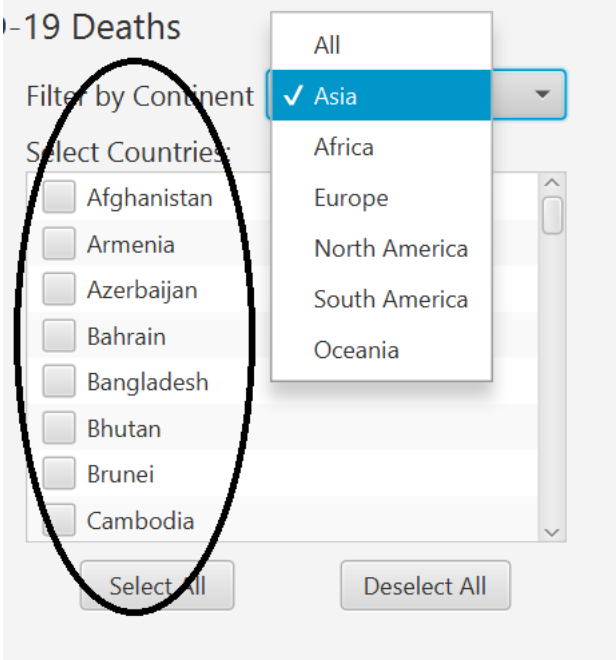


Supplementary Notes for Table-Generating Task B1

0. Additional features 0.1, 0.2, 0.3 – Mentioned in Shared Supplementary Backend**1. Additional feature 1 – Country Selection by Continent**

The feature allows user to filter countries on the country selection view based on the continent they belong to. The sample implementation of the feature has been given below:

<u>Original Country Selection Filter</u>	<u>Country Selection Filter by Continent - Asia</u>
 <p>Filter by Continent: All</p> <p>Select Countries:</p> <ul style="list-style-type: none"><input type="checkbox"/> Afghanistan<input type="checkbox"/> Africa<input type="checkbox"/> Albania<input type="checkbox"/> Algeria<input type="checkbox"/> Andorra<input type="checkbox"/> Angola<input type="checkbox"/> Anguilla<input type="checkbox"/> Antigua and Barbuda <p>Select All Deselect All</p>	 <p>COVID-19 Deaths</p> <p>Filter by Continent: Asia</p> <p>Select Countries:</p> <ul style="list-style-type: none"><input type="checkbox"/> Afghanistan<input type="checkbox"/> Armenia<input type="checkbox"/> Azerbaijan<input type="checkbox"/> Bahrain<input type="checkbox"/> Bangladesh<input type="checkbox"/> Bhutan<input type="checkbox"/> Brunei<input type="checkbox"/> Cambodia <p>Select All Deselect All</p>

As noted in the image comparison above, only the nations that belong to Asia were displayed after selecting Asia from the Choice Box.

2. Additional feature 2 – Select/Deselect All

The feature allows user to select or deselect all countries on the country selection view.

The sample implementation of the feature has been given below:

<u>Select All</u>	<u>DeSelect All</u>
<div><p>Filter by Continent All</p><p>Select Countries:</p><div><input checked="" type="checkbox"/> Afghanistan <input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Albania <input checked="" type="checkbox"/> Algeria <input checked="" type="checkbox"/> Andorra <input checked="" type="checkbox"/> Angola <input checked="" type="checkbox"/> Anguilla <input checked="" type="checkbox"/> Antigua and Barbuda</div><div>Select All Deselect All</div></div>	<div><p>Filter by Continent All</p><p>Select Countries:</p><div><input type="checkbox"/> Afghanistan <input type="checkbox"/> Africa <input type="checkbox"/> Albania <input type="checkbox"/> Algeria <input type="checkbox"/> Andorra <input type="checkbox"/> Angola <input type="checkbox"/> Anguilla <input type="checkbox"/> Antigua and Barbuda</div><div>Select All Deselect All</div></div>

3. Important Note about Input Validation Basic Requirement

For basic validation requirement, I had customized settings such that user could, by default, only select dates using date picker. This way, the user could only select dates from country list selection and date picker selection, making it impossible for them to have syntactical input errors.

The following steps have been taken to prevent logical errors:

3.1. Appropriately label non-existent dates

If a record does not exist in the CSV, then the table view will present it as a N/A element.

Consider Anguilla at 7/16/2021

3214	AIA	North Am	Anguilla	7/11/2021															
3215	AIA	North Am	Anguilla	7/12/2021															
3216	AIA	North Am	Anguilla	7/13/2021															
3217	AIA	North Am	Anguilla	7/14/2021															
3218	AIA	North Am	Anguilla	7/15/2021															
3219	AIA	North Am	Anguilla	7/16/2021															

We have no corresponding record of death nor death per million in CSV, so table is:

Number of Confirmed COVID-19 Deaths as of July 16, 2021		
Country	Total Deaths	Total Deaths (per 1M)
Anguilla	N/A	N/A

3.2. Restrict Possible Date Range

Range of dates in CSV is from 1/1/2020 to 7/20/2021. So, we cannot select dates beyond the range from date Picker.

Figure: Cannot Select dates beyond 7/20/2021

Confirmed COVID-19 Deaths

Select Date:

Filter by Continent:

Select Countries:

- ☐ Afghanistan
- ☐ Africa
- ☐ Albania
- ☐ Algeria
- ☐ Andorra
- ☐ Angola
- ☐ Anguilla
- ☐ Antigua and Barbuda

Select All Deselect All

Console

< July > < 2021 >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7

Figure: Cannot Select Dates before 1/1/2020

Confirmed COVID-19 Deaths

Select Date:

Filter by Continent:

Select Countries:

- ☐ Afghanistan
- ☐ Africa
- ☐ Albania
- ☐ Algeria
- ☐ Andorra
- ☐ Angola
- ☐ Anguilla
- ☐ Antigua and Barbuda

Select All Deselect All

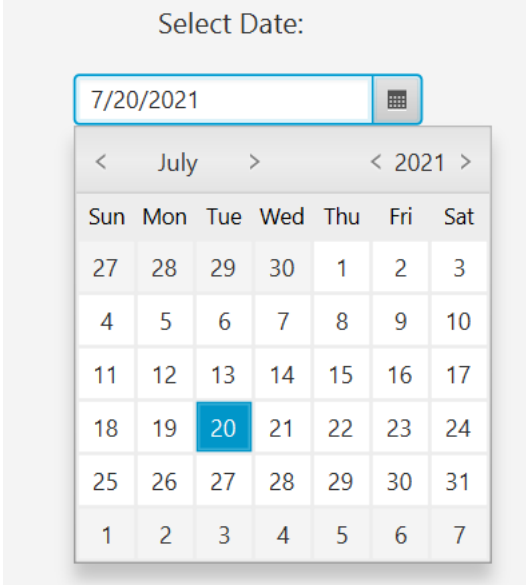
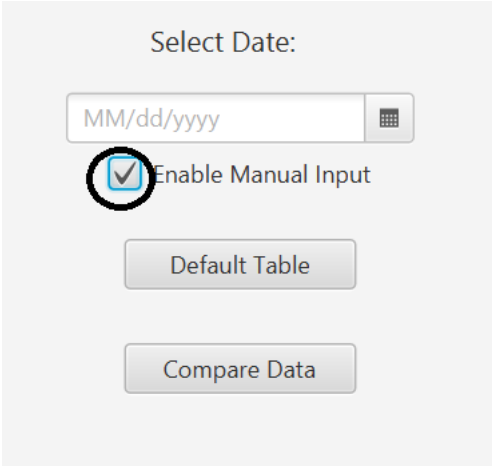
Console

< January > < 2020 >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

4. Additional feature 3 – Enter Date Manually



However, as an extension, I have created an enable manual input option that allows the user to manually type data in addition to using date picker.

<u>Normal Setting- Cannot enter date manually</u>	<u>Additional feature- Can enter date manually after checking enable option</u>
<p>Select Date:</p> 	<p>Select Date:</p> 



5. Additional feature 4.5 – Date Validation in Enable Input

Additional validation features have been added to validate the additional feature – Enable Manual Input. Some samples of validation have been provided below:

Situation 1: If User gives input that is not a date

Non-Date Input	Alert
<p>Select Date:</p> <div><input type="text" value="wwe"/> </div> <p><input checked="" type="checkbox"/> Enable Manual Input</p> <p><input type="button" value="Default Table"/></p> <p><input type="button" value="Compare Data"/></p>	<p>21/11/2020 </p> <p>Select Countries: <input type="checkbox"/> Afghanistan</p> <p><input checked="" type="checkbox"/> Enable Manual Input</p> <p><input type="button" value="Default Table"/></p> <p><input type="button" value="Compare Data"/></p> <p><input type="button" value="Select All"/> <input type="button" value="Deselect All"/></p> <div><div>Error</div><div>Please Enter Date Again in MM/dd/yyyy format!</div><div>OK</div></div>

Situation 2: If User gives input in incorrect format

For input in dd/MM/yyyy	Alert
<p>Select Date:</p> <div><input type="text" value="21/11/2020"/> </div> <p><input checked="" type="checkbox"/> Enable Manual Input</p> <p><input type="button" value="Default Table"/></p> <p><input type="button" value="Compare Data"/></p>	<p>21/11/2020 </p> <p>Select Countries: <input type="checkbox"/> Afghanistan</p> <p><input checked="" type="checkbox"/> Enable Manual Input</p> <p><input type="button" value="Default Table"/></p> <p><input type="button" value="Compare Data"/></p> <p><input type="button" value="Select All"/> <input type="button" value="Deselect All"/></p> <div><div>Error</div><div>Please Enter Date Again in MM/dd/yyyy format!</div><div>OK</div></div>

Situation 3: Validation of leap year

No leap year in 2019 so incorrect	Leap year in 2020 so works						
<p>Select Date: <input type="text" value="2/29/2019"/> </p> <p><input checked="" type="checkbox"/> Enable Manual Input</p> <p>Filter by C</p> <p>Select Co</p> <p><input type="checkbox"/> Afgha</p> <p><input type="checkbox"/> Africa</p> <p><input type="checkbox"/> bar</p> <p><input type="checkbox"/> ger</p> <p><input type="checkbox"/> do</p> <p><input type="checkbox"/> go</p> <p><input type="checkbox"/> gu</p> <p><input type="checkbox"/> tig</p> <p><input type="checkbox"/> Sel</p> <div> <p>Error</p> <p>Error</p> <p>Please Enter Date Again in MM/dd/yyyy format!</p> <p>OK</p> </div>	<p>Select Date: <input type="text" value="2/29/2020"/> </p> <p><input checked="" type="checkbox"/> Enable Manual Input</p> <p>Filter b</p> <p>Select (</p> <p><input type="checkbox"/> Af</p> <p><input type="checkbox"/> Af</p> <table border="1"> <thead> <tr> <th colspan="3">Number of Confirmed COVID-19 Deaths as of February 29, 2020</th> </tr> <tr> <th colspan="3">Total Deaths</th> </tr> </thead></table>	Number of Confirmed COVID-19 Deaths as of February 29, 2020			Total Deaths		
Number of Confirmed COVID-19 Deaths as of February 29, 2020							
Total Deaths							

6. Additional feature 6 – Compare Data

For less than 15 countries (due to JavaFX limitation of bar chart), the implementation allows user to create bar chart from given input for data comparison. A sample implementation is given below:

Sample input

Task Zero Table A Table B Table C Chart A Chart B Chart C

Confirmed COVID-19 Deaths

Select Date:

☐ Enable Manual Input

Default Table

Compare Data

Filter by Continent All

Select Countries:

- ☐ Afghanistan
- ☐ Africa
- ☒ Albania
- ☒ Algeria
- ☒ Andorra
- ☐ Angola
- ☐ Anguilla
- ☐ Antigua and Barbuda

Select All Deselect All

Console

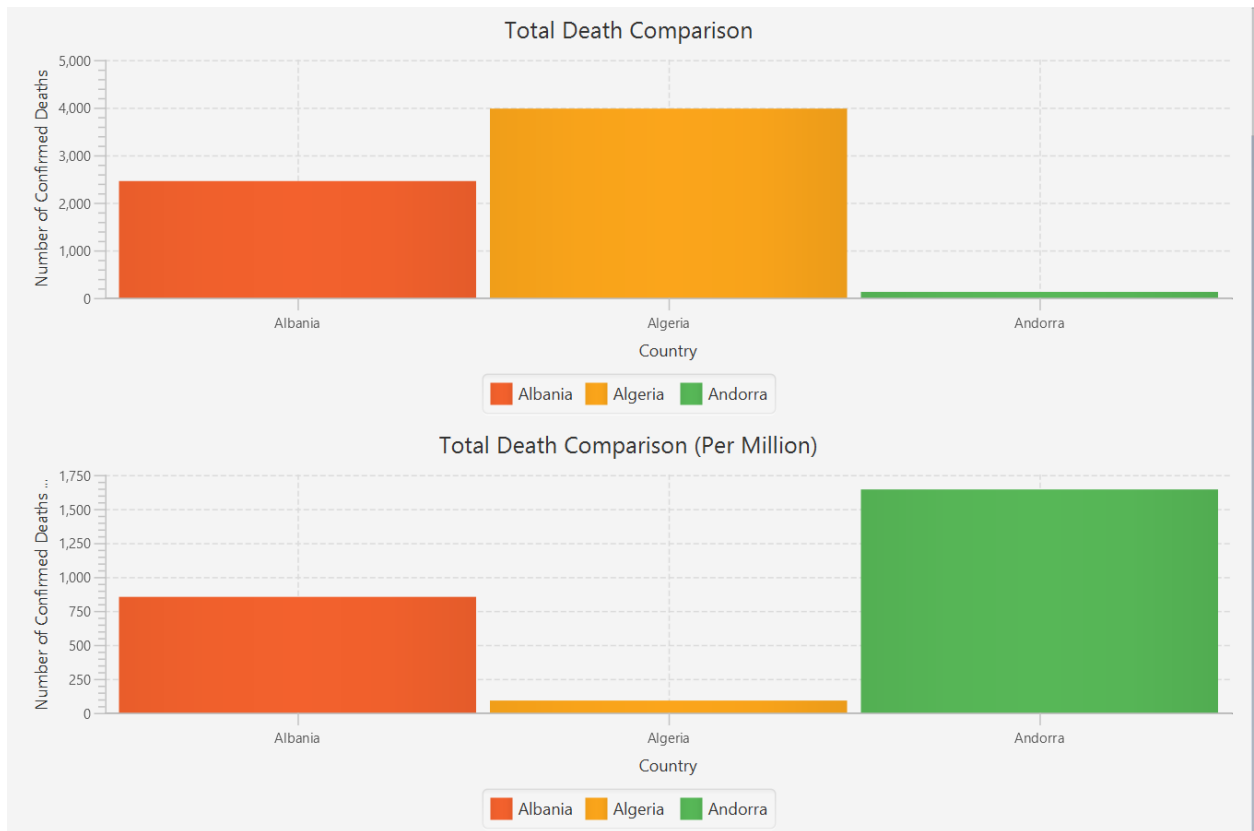
Sample Output**7. Feature – Table Formatting**

Table has been formatted such that:

- Total Death column items are aligned to right and have been formatted as a number string to have appropriate commas.
- Total Deaths (per 1M) column items are aligned to right and have been formatted to have 2 s.f. and appropriate commas.

Sample image of table is shown below for reference:

Number of Confirmed COVID-19 Deaths as of March 25, 2021			
Country	Total Deaths		Total Deaths (per 1M)
China	4,636		3.22
Georgia	3,732		935.53
Hong Kong	204		27.21
India	160,949		116.63
Indonesia	40,081		146.54
Iran	62,142		739.85
Iraq	14,128		351.25
Israel	6,163		712.03