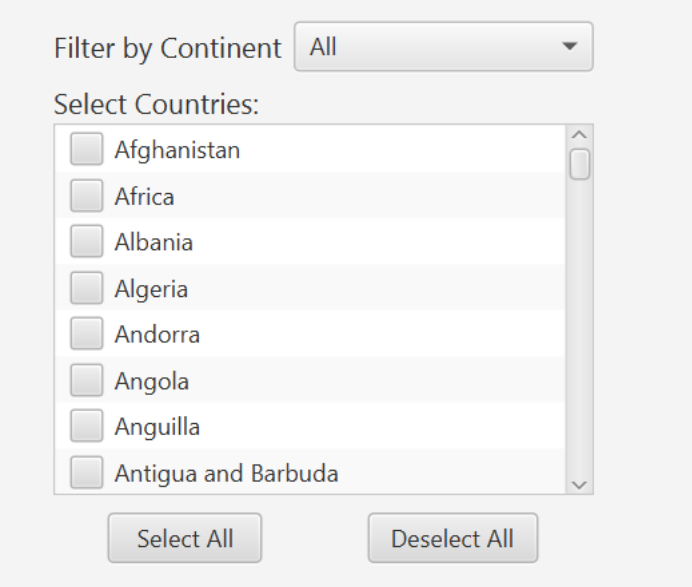
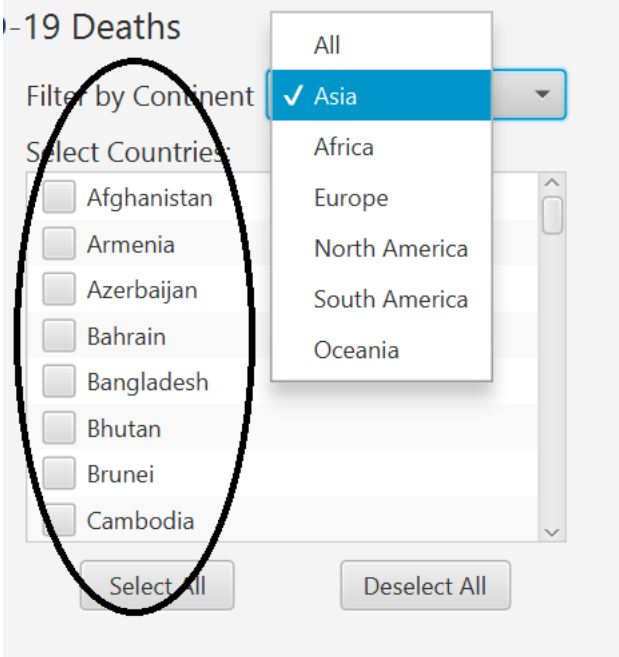


Supplementary Notes for Chart-Generating Task B2

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>

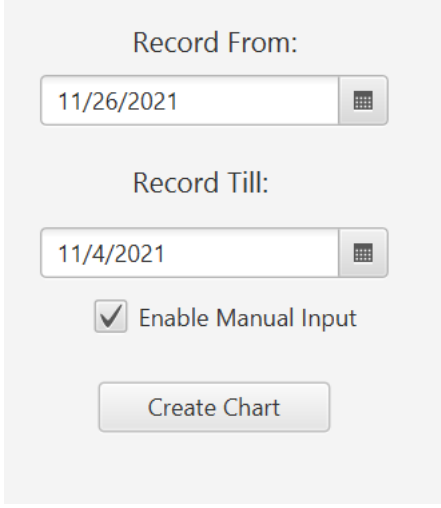
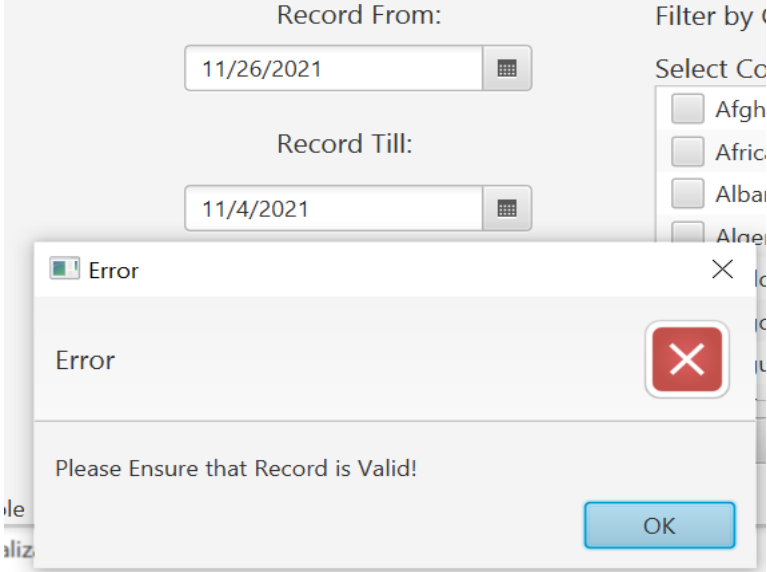
3. Important Note about Input Validation Basic Requirement

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. Never Allow Record Till to be less than Record From

For logical errors, an alert box will be displayed if the Record Till is detected to be less than Record From. A sample image is displayed below:

<u>Sample Input</u>	<u>Sample Output</u>
 <p>The sample input form contains two date pickers. The 'Record From' picker is set to 11/26/2021. The 'Record Till' picker is set to 11/4/2021. There is a checkbox labeled 'Enable Manual Input' which is checked. At the bottom is a 'Create Chart' button.</p>	 <p>The sample output shows the same form as the input, but with an error dialog box overlaid. The dialog box is titled 'Error' and contains the message 'Please Ensure that Record is Valid!'. It has an 'OK' button. The background form shows the 'Record From' date as 11/26/2021 and the 'Record Till' date as 11/4/2021. To the right of the form, there is a 'Filter by' section with a 'Select Co' dropdown and a list of checkboxes for 'Afgh', 'Afric', 'Alba', and 'Alge'.</p>

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

Cumulative Confirmed COVID-19 Deaths (Per 1M) by Country

Record From: 3/1/2020

Record Till: 7/20/2021

Filter by Continent: All

Select Countries:

- ☐ Afghanistan
- ☐ Africa
- ☐ Albania
- ☐ Algeria
- ☐ Andorra
- ☐ Angola
- ☐ Anguilla

Select All Deselect All

Calendar view for 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

Cumulative Confirmed COVID-19 Deaths (Per 1M) by Country

Record From: 3/1/2020

Record Till: 1/1/2020

Filter by Continent: All

Select Countries:

- ☐ Afghanistan
- ☐ Africa
- ☐ Albania
- ☐ Algeria
- ☐ Andorra
- ☐ Angola
- ☐ Anguilla




Select All Deselect All

Calendar view for 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.

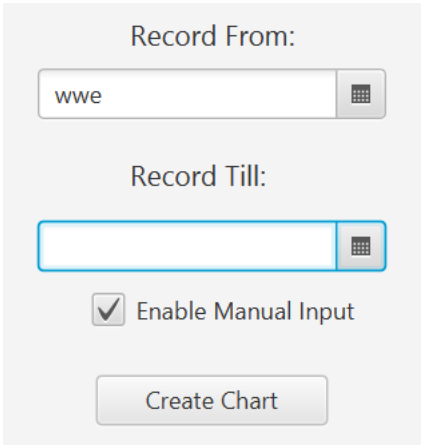
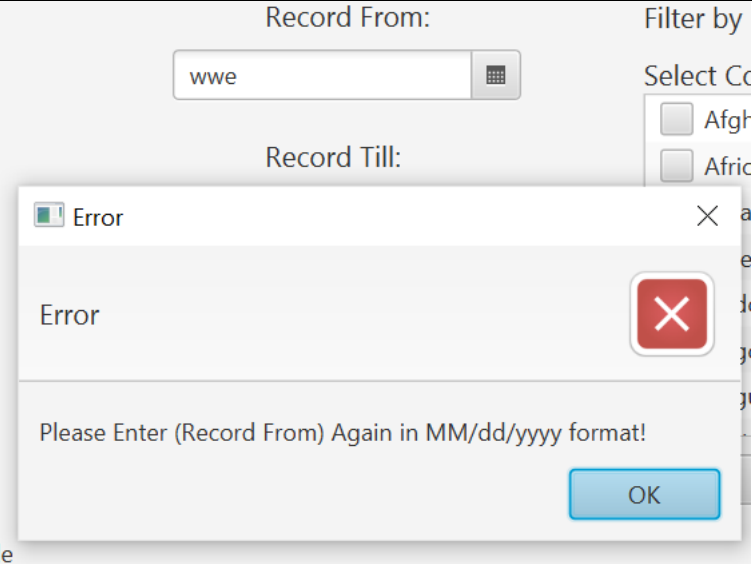
<u>Normal Setting- Cannot enter date manually</u>	<u>Additional feature- Can enter date manually after checking enable option</u>																																																	
<div><p>Record From:</p><div><input type="text" value="3/1/2020"/></div><div><div>< March ></div><div>< 2020 ></div><table><tr><th>Sun</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td></tr><tr><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td></tr><tr><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td></tr><tr><td>29</td><td>30</td><td>31</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr></table></div></div>	Sun	Mon	Tue	Wed	Thu	Fri	Sat	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	9	10	11	<div><p>Record From:</p><div><input type="text" value="MM/dd/yyyy"/></div><p>Record Till:</p><div><input type="text" value="MM/dd/yyyy"/></div><div><input checked="" type="checkbox"/> Enable Manual Input</div><div>Create Chart</div></div>
Sun	Mon	Tue	Wed	Thu	Fri	Sat																																												
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	9	10	11																																												

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 in not a date

Non-Date Input	Alert
	

Situation 2: If User gives input in incorrect format

For input in dd/MM/yyyy	Alert
<p>Record From:</p> <p>21/12/2020</p> <p>Record Till:</p> <p>23/12/2020</p> <p><input checked="" type="checkbox"/> Enable Manual Input</p> <p>Create Chart</p>	<p>Record From:</p> <p>21/12/2020</p> <p>Record Till:</p> <p>23/12/2020</p> <p>Filter by</p> <p>Select C</p> <p><input type="checkbox"/> Afg</p> <p><input type="checkbox"/> Afri</p> <p><input type="checkbox"/> Alb</p> <p><input type="checkbox"/> Ali</p> <p>Error</p> <p>Error</p> <p>Please Enter (Record From) Again in MM/dd/yyyy format!</p> <p>OK</p>

Situation 3: Validation of leap year

No leap year in 2019 so incorrect

Record From: 2/29/2019

Record Till: 7/20/2021

Error

Please Ensure that Record is Valid!

OK

Leap year in 2020 so works

Record From: 2/29/2020

Record Till: 7/20/2021

Cumulative Confirmed COVID-19 Deaths (per 1M)