Project Step 3

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Short Desciription

The idea of my project is keeping data of covid datas which is belongs to USA. It is important for government to arrange vaccination for states. The illness (covid-19) is spreading people with different speed state by state. So this database system is helping them to distribute vaccines state by state . As we can see on datas , some of states needed these vaccination more then others.

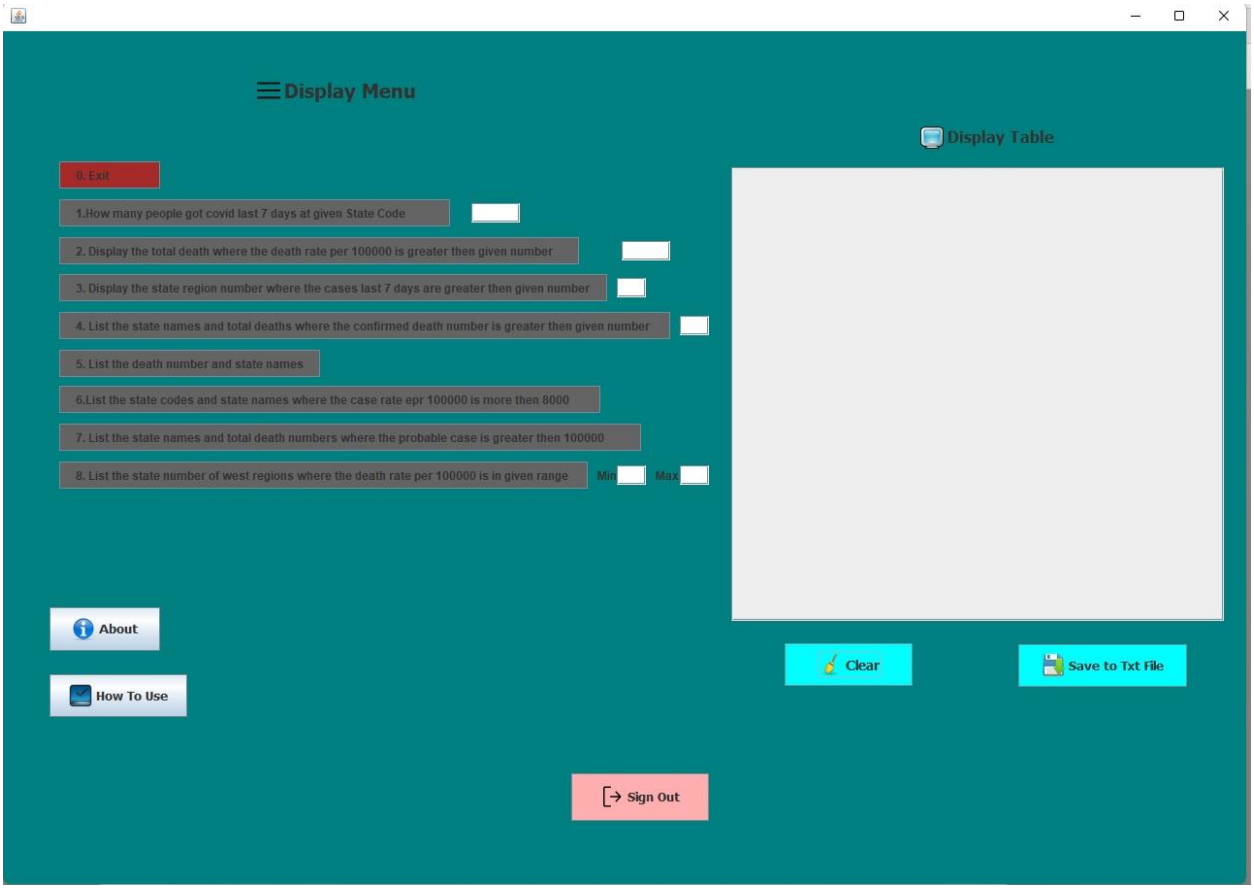
Type Of Data Usage

i) Yes I use real data . I found it from Kaggle (https://www.kaggle.com/datasets/brendan45774/covid19-us-marchseptember?select=1-1-21+US+covid19.csv)
I use real datas for all of my table except one of my column 'location' on died_in table .

ii) No I did not.

iii) Yes, I use (https://www.mockaroo.com/) site for generating locations.

I design a GUI.

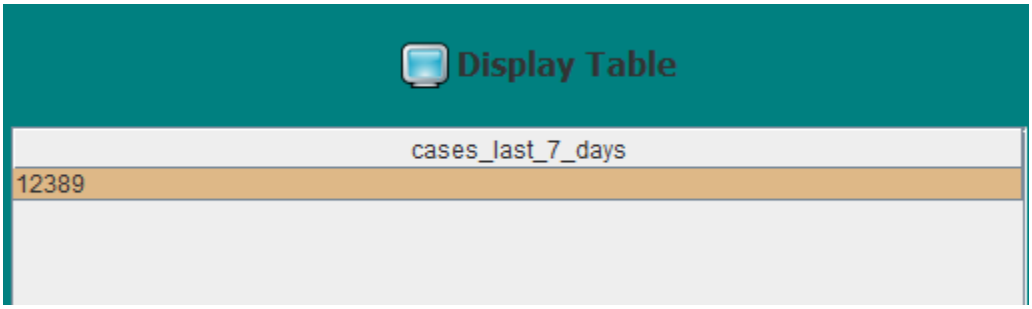


Queries :

```
1.How many people got covid last 7 days at given State Code

query1=select cases_last_7_days
       from get_sick
       where state_code ='q1'
```

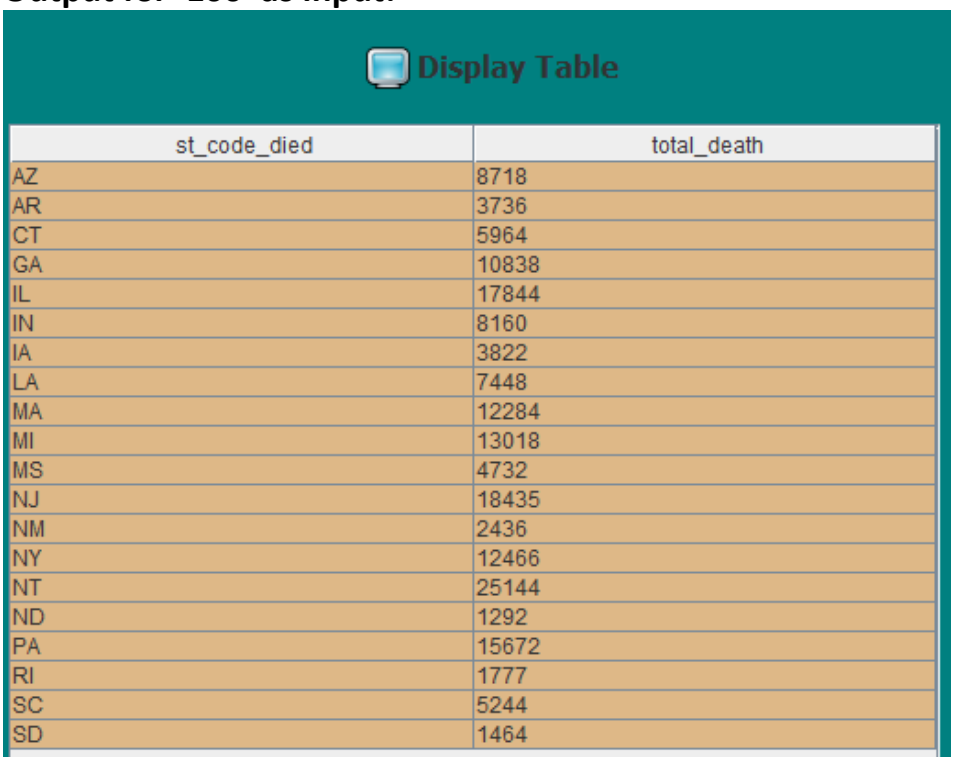
Output for 'IL' as input :




```
2. 2. Display state code and the total death where the death rate per 100000
is greater then given number

      query2=select st_code_died,total_death
            from death,death_rate,died_in
            where death_state=state_death AND death_state=died_state AND
death_rate_per_100000 > 'q2'
```

Output for '100' as input:



st_code_died	total_death
AZ	8718
AR	3736
CT	5964
GA	10838
IL	17844
IN	8160
IA	3822
LA	7448
MA	12284
MI	13018
MS	4732
NJ	18435
NM	2436
NY	12466
NT	25144
ND	1292
PA	15672
RI	1777
SC	5244
SD	1464

```
3. Display the state region number where the cases last 7 days are greater
then given number
query3 =Select st_region,count(st_region) as number_of_states
        From states\r\n"
        Where st_name IN  ( Select sta_name
                            From get_sick
                            Where   cases_last_7_days>' q3')
        group by st_region;
```

Output for '100'as Input:

Display Table

st_region	number_of_states
West	11
South	18
Other	5
Northeast	10
Midwest	12

```
4. List the state names and total deaths \twhere the confirmed death number
is greater then given number
query4 = select death_state,total_death
         from death
         confirmed_death >'q4'
```

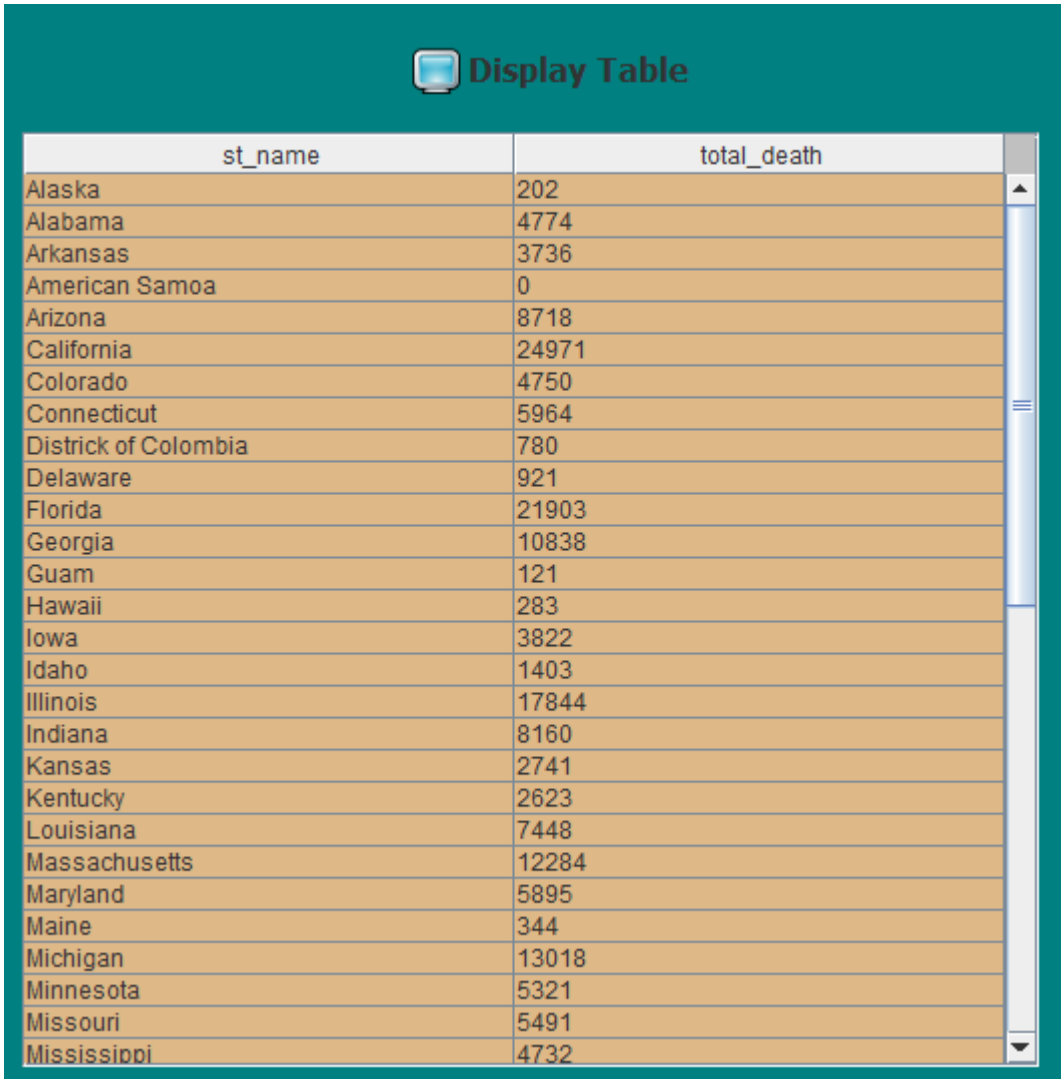
Output for '5000' as input

Display Table

death_state	total_death
Arizona	8718
Georgia	10838
Illinois	17844
Indiana	8160
Louisiana	7448
Maryland	5895
Massachusetts	12284
Michigan	13018
Minnesota	5321
New Jersey	18435
New York City	25144
North Carolina	6744
Ohio	8855
Tennessee	6810

```
5. List the death number and state names
query5=select st_name,total_death
      states,died_in,death
      where st_code=st_code_died AND state_death=death_state;
```

Output :



st_name	total_death
Alaska	202
Alabama	4774
Arkansas	3736
American Samoa	0
Arizona	8718
California	24971
Colorado	4750
Connecticut	5964
District of Colombia	780
Delaware	921
Florida	21903
Georgia	10838
Guam	121
Hawaii	283
Iowa	3822
Idaho	1403
Illinois	17844
Indiana	8160
Kansas	2741
Kentucky	2623
Louisiana	7448
Massachusetts	12284
Maryland	5895
Maine	344
Michigan	13018
Minnesota	5321
Missouri	5491
Mississippi	4732

```
6.List the state codes and state names where the case rate epr 100000 is more
then 8000
Select st_code , st_name
from states,case_rate
where st_name=case_state AND case_rate_per_100000>8000;
```

Output :

Display Table

st_code	st_name
IA	Iowa
ND	North Dakota
NE	Nebraska
RI	Rhode Island
SD	South Dakota
TN	Tennessee
UT	Utah
WI	Wisconsin

```
7. List the state names and total death numbers where the probable case is
greater then 100000
query7=select death_state,total_death
       from death
       where death_state IN ( select state_name
                              from case_states
                              where confirmed_case >100000);
```

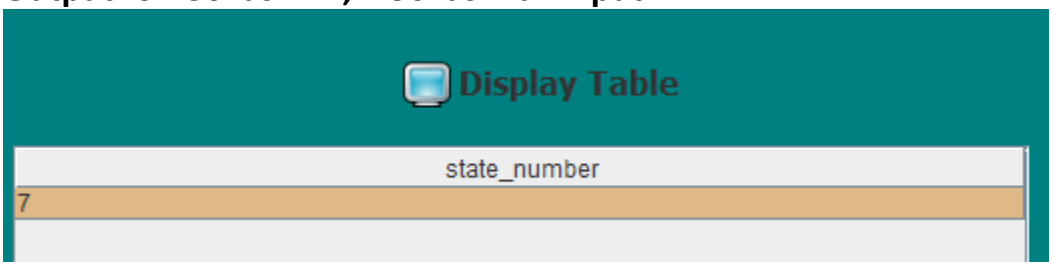
Output :

Display Table

death_state	total_death
Alabama	4774
Arizona	8718
Colorado	4750
Connecticut	5964
Georgia	10838
Idaho	1403
Illinois	17844
Kansas	2741
Kentucky	2623
Massachusetts	12284
Michigan	13018
Mississippi	4732
New York City	25144
North Carolina	6744
Ohio	8855
Oklahoma	2496
Oregon	1468
Pennsylvania	15672
South Carolina	5244
Tennessee	6810
Utah	1256
Virginia	5032
Wisconsin	5192

```
8. List the state number of west regions where the death rate per 100000 is
in given range
query8=select count(st_name) as state_number
      from states
      st_region 'West' AND st_name IN(
                                    select died_state
                                    from death_rate
                                    where death_rate_per_100000
                                    > 'minimum' AND death_rate_per_100000 <
'maximum');
```

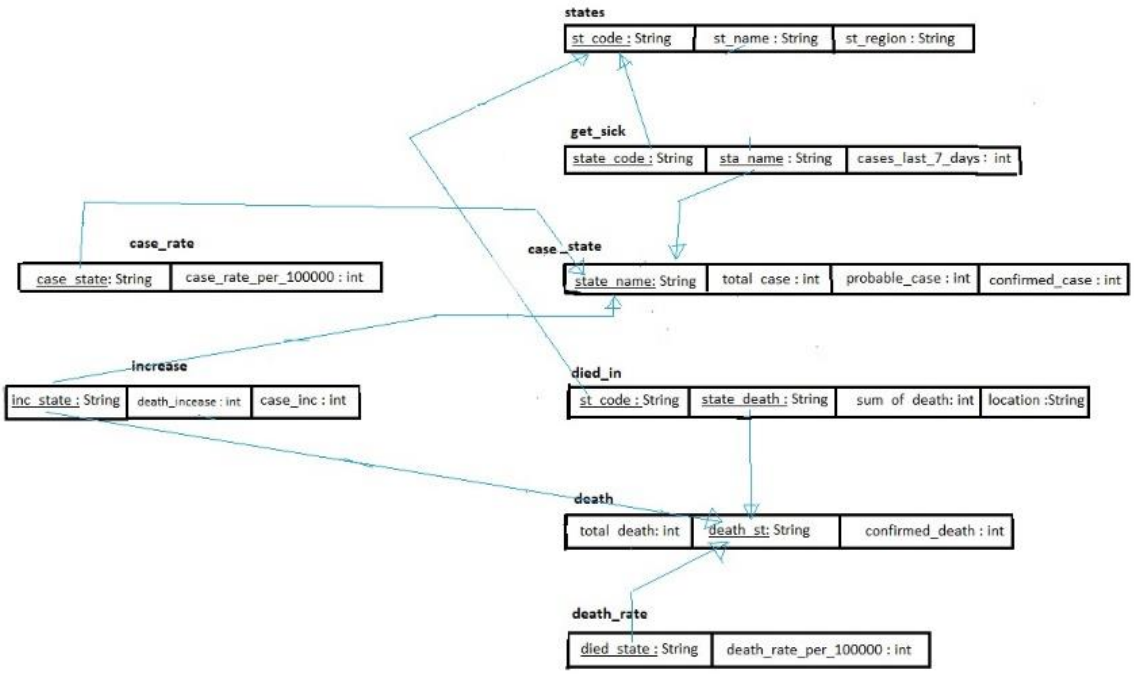
Output for '50' as min, '150' as max input :



Edits/Modifications/Adjustments

Relational Shema : I removed the dates of the data and I just import a specific date which is ‘’01-01-2021”:

I got some error about multiple primary keys so I remove some of them.



Queries : Since I removed the 'date' from all of my tables, I changed all of my queries :

1.How many people got covid last 7 days at given State Code

```
query1=select cases_last_7_days
       from get_sick
       where state_code ='q1'
```

2.Display state code and the total death where the death rate per 100000 is greater then given number

```
      query2=select st_code_died,total_death
            from death,death_rate,died_in
            where death_state=state_death AND death_state=died_state AND
death_rate_per_100000 > 'q2'
```

3. Display the state region number where the cases last 7 days are greater then given number

```
query3 =Select st_region,count(st_region) as number_of_states
        From states\r\n"
        Where st_name IN  ( Select sta_name
                            From get_sick
                            Where   cases_last_7_days>' q3')
        group by st_region;
```

4. List the state names and total deaths \twhere the confirmed death number is greater then given number

```
query4 = select death_state,total_death
         from death
         confirmed_death >'q4'
```

5. List the death number and state names

```
query5=select st_name,total_death
      states,died_in,death
      where st_code=st_code_died AND state_death=death_state;
```

6.List the state codes and state names where the case rate epr 100000 is more then 8000

```
Select st_code , st_name
from states,case_rate
where st_name=case_state AND case_rate_per_100000>8000;
```

7. List the state names and total death numbers where the probable case is greater then 100000

```
query7=select death_state,total_death
       from death
       where death_state IN ( select state_name
                              from case_states
                              where confirmed_case >100000);
```

8. List the state number of west regions where the death rate per 100000 is in given range

```
query8=select count(st_name) as state_number
      from states
      st_region 'West' AND st_name IN(
                                      select died_state
                                      from death_rate
                                      where death_rate_per_100000
                                      > 'minimum' AND death_rate_per_100000 <
'maximum');
```

References:

https://www.youtube.com/watch?v=k1_oA8v6Rc0&ab_channel=ESDTutorials

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https://www.youtube.com/watch?v=k1_oA8v6Rc0

https://www.youtube.com/watch?v=LP7_DlIe670&ab_channel=1BestCsharpblog

https://www.tutorialspoint.com/mysql-error-1452-cannot-add-or-update-a-child-row-a-foreign-key-constraint-fails#:~:text=The%20error%20comes%20when%20you,in%20in%20the%20other%20table.&text=%E2%80%9CForeign%20key%20relationships%20involve%20a,specified%20in%20the%20child%20table.

https://www.youtube.com/watch?v=iE8tZ0hn2Ws&ab_channel=AlexLee

https://www.youtube.com/watch?v=k1_oA8v6Rc0&list=PL0Eca86_zC8_MAgRcCTrmZafEEiFXTUje&index=3

https://stackoverflow.com/questions/14762904/incorrect-integer-value-for-column-id-at-row-1

https://www.tutorialspoint.com/mysql-error-1452-cannot-add-or-update-a-child-row-a-foreign-key-constraint-fails#:~:text=The%20error%20comes%20when%20you,in%20in%20the%20other%20table.&text=%E2%80%9CForeign%20key%20relationships%20involve%20a,specified%20in%20the%20child%20table.

https://bugs.mysql.com/bug.php?id=90945

Thank you.