In [1]:
```
pip install pandas
```

```
Requirement already satisfied: pandas in d:\samiksha\lib\site-packages (1.4.2)
Requirement already satisfied: python-dateutil>=2.8.1 in d:\samiksha\lib\site-p
ackages (from pandas) (2.8.2)
Requirement already satisfied: numpy>=1.18.5 in d:\samiksha\lib\site-packages
(from pandas) (1.21.5)
Requirement already satisfied: pytz>=2020.1 in d:\samiksha\lib\site-packages (f
rom pandas) (2021.3)
Requirement already satisfied: six>=1.5 in d:\samiksha\lib\site-packages (from
python-dateutil>=2.8.1->pandas) (1.16.0)
Note: you may need to restart the kernel to use updated packages.
```

In [2]:
```
import pandas as pd
```

In [3]:
```
data=pd.read_csv('covid_19_india.csv')
```

In [24]:
```
data
```

Out[24]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	1	2020-01-30	6:00 PM	Kerala	1	0
1	2	2020-01-31	6:00 PM	Kerala	1	0
2	3	2020-02-01	6:00 PM	Kerala	2	0
3	4	2020-02-02	6:00 PM	Kerala	3	0
4	5	2020-02-03	6:00 PM	Kerala	3	0
...	...	...	...	...	...	...
16845	16846	2021-07-07	8:00 AM	Telangana	-	-
16846	16847	2021-07-07	8:00 AM	Tripura	-	-
16847	16848	2021-07-07	8:00 AM	Uttarakhand	-	-
16848	16849	2021-07-07	8:00 AM	Uttar Pradesh	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

16850 rows × 9 columns

In [6]:
```
# Display a summary of the basic information about this DataFrame and its data.
```

In [7]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 16850 entries, 0 to 16849
Data columns (total 9 columns):
 #   Column                    Non-Null Count  Dtype 
---  ------                    --------------  ----- 
 0   Sno                       16850 non-null  int64 
 1   Date                      16850 non-null  object
 2   Time                      16850 non-null  object
 3   State/UnionTerritory      16850 non-null  object
 4   ConfirmedIndianNational   16850 non-null  object
 5   ConfirmedForeignNational  16850 non-null  object
 6   Cured                     16850 non-null  int64 
 7   Deaths                    16850 non-null  int64 
 8   Confirmed                 16850 non-null  int64 
dtypes: int64(4), object(5)
memory usage: 1.2+ MB
```

In [9]:
```
# describe the data
```

In [10]:
```
data.describe()
```

Out[10]:

	Sno	Cured	Deaths	Confirmed
count	16850.000000	1.685000e+04	16850.000000	1.685000e+04
mean	8425.500000	2.360353e+05	3485.222552	2.583667e+05
std	4864.320353	5.225438e+05	9330.541749	5.672808e+05
min	1.000000	0.000000e+00	0.000000	0.000000e+00
25%	4213.250000	2.658500e+03	22.000000	3.644750e+03
50%	8425.500000	2.889500e+04	453.000000	3.336150e+04
75%	12637.750000	2.537510e+05	3071.250000	2.666530e+05
max	16850.000000	5.872268e+06	123531.000000	6.113335e+06

In [12]:
```
# return the first 3 rows of the DataFrame.
```

In [13]:
```
data.iloc[:3]
```

Out[13]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	Cure
0	1	2020-01-30	6:00 PM	Kerala	1	0	
1	2	2020-01-31	6:00 PM	Kerala	1	0	
2	3	2020-02-01	6:00 PM	Kerala	2	0	

In [14]:
```
data.head(3)
```

Out[14]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	Cured
0	1	2020-01-30	6:00 PM	Kerala	1	0	
1	2	2020-01-31	6:00 PM	Kerala	1	0	
2	3	2020-02-01	6:00 PM	Kerala	2	0	

In [30]:
```
# show columns names and index.
```

In [28]:
```
data.columns
```

Out[28]:
```
Index(['Sno', 'Date', 'Time', 'State/UnionTerritory',
       'ConfirmedIndianNational', 'ConfirmedForeignNational', 'Cured',
       'Deaths', 'Confirmed'],
      dtype='object')
```

In [29]:
```
data.index
```

Out[29]:
```
RangeIndex(start=0, stop=16850, step=1)
```

In [33]:
```
# select the data in rows [3,4,8]
```

In [32]:
```
data.loc[data.index[[3,4,8]]]
```

Out[32]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	Cured
3	4	2020-02-02	6:00 PM	Kerala	3	0	
4	5	2020-02-03	6:00 PM	Kerala	3	0	
8	9	2020-02-07	6:00 PM	Kerala	3	0	

In [41]:
```
# select just the "state/unionterritory" column from the dataframe
```

In [40]:
```
data['State/UnionTerritory']
```

Out[40]:
```
0              Kerala
1              Kerala
2              Kerala
3              Kerala
4              Kerala
              ...
16845       Telangana
16846         Tripura
16847     Uttarakhand
16848   Uttar Pradesh
16849     West Bengal
Name: State/UnionTerritory, Length: 16850, dtype: object
```

In [43]:
```
#select just the 'Sno'and 'Confirmedindiannational' columns from the dataframe
```

In [44]:
```
data[['Sno','ConfirmedIndianNational']]
```

Out[44]:

	Sno	ConfirmedIndianNational
0	1	1
1	2	1
2	3	2
3	4	3
4	5	3
...	...	...
16845	16846	-
16846	16847	-
16847	16848	-
16848	16849	-
16849	16850	-

16850 rows × 2 columns

In [47]:
```
#select the data in [3,5,7] and in columns ['confirmedforeignnational','cured']
```

In [48]:
```
data.loc[data.index[[3,5,7]],['ConfirmedForeignNational','Cured']]
```

Out[48]:

	ConfirmedForeignNational	Cured
3	0	0
5	0	0
7	0	0

In [51]:
```
# select only the rows where the numbers of 'sno' is less than 8.
```

In [56]:
```
data[data['Sno']<8]
```

Out[56]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	Cure
0	1	2020-01-30	6:00 PM	Kerala	1	0	
1	2	2020-01-31	6:00 PM	Kerala	1	0	
2	3	2020-02-01	6:00 PM	Kerala	2	0	
3	4	2020-02-02	6:00 PM	Kerala	3	0	
4	5	2020-02-03	6:00 PM	Kerala	3	0	
5	6	2020-02-04	6:00 PM	Kerala	3	0	
6	7	2020-02-05	6:00 PM	Kerala	3	0	

In [55]:
```
# find the NaN value
```

In [54]:
```
data.isnull()
```

Out[54]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	False	False	False	False	False	False
1	False	False	False	False	False	False
2	False	False	False	False	False	False
3	False	False	False	False	False	False
4	False	False	False	False	False	False
...	...	...	...	...	...	...
16845	False	False	False	False	False	False
16846	False	False	False	False	False	False
16847	False	False	False	False	False	False
16848	False	False	False	False	False	False
16849	False	False	False	False	False	False

16850 rows × 9 columns

In [61]:
```
# select the rows where the confirmedindiannational is equal to 3.
```

In [64]:
```
data[(data['ConfirmedIndianNational']=='3')]
```

Out[64]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	Cu
3	4	2020-02-02	6:00 PM	Kerala	3	0	
4	5	2020-02-03	6:00 PM	Kerala	3	0	
5	6	2020-02-04	6:00 PM	Kerala	3	0	
6	7	2020-02-05	6:00 PM	Kerala	3	0	
7	8	2020-02-06	6:00 PM	Kerala	3	0	
...	...	...	...	...	...	...	...
398	399	2020-03-27	10:00 AM	Goa	3	0	
401	402	2020-03-27	10:00 AM	Himachal Pradesh	3	0	
425	426	2020-03-28	6:00 PM	Goa	3	0	
428	429	2020-03-28	6:00 PM	Himachal Pradesh	3	0	
437	438	2020-03-28	6:00 PM	Odisha	3	0	

73 rows × 9 columns

In [66]:
```
# select the rows where the confirmedindiannational is a equal to 3 and the state
```

In [67]:
```
data[(data['ConfirmedIndianNational']=='3')& (data['State/UnionTerritory']=='Goa'
```

Out[67]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	Cu
371	372	2020-03-26	6:00 PM	Goa	3	0	
398	399	2020-03-27	10:00 AM	Goa	3	0	
425	426	2020-03-28	6:00 PM	Goa	3	0	

In [71]:
```
# select the rows the comfirmed is between 2 and 3 (inclusive)
```

In [154]:
```
data[data['Confirmed'].between(100,1000)]
```

Out[154]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
348	349	2020-03-25	6:00 PM	Kerala	101	8
350	351	2020-03-25	6:00 PM	Maharashtra	125	3
377	378	2020-03-26	6:00 PM	Kerala	110	8
380	381	2020-03-26	6:00 PM	Maharashtra	121	3
404	405	2020-03-27	10:00 AM	Kerala	129	8
...	...	...	...	...	...	...
13771	13772	2021-04-13	8:00 AM	Lakshadweep	-	-
13807	13808	2021-04-14	8:00 AM	Lakshadweep	-	-
13843	13844	2021-04-15	8:00 AM	Lakshadweep	-	-
13879	13880	2021-04-16	8:00 AM	Lakshadweep	-	-
13915	13916	2021-04-17	8:00 AM	Lakshadweep	-	-

1167 rows × 9 columns

In [75]:
```
# change the deaths in row 3 to 3.
```

In [76]:
```
data.loc[2,'Deaths']=3
```

In [125]:
```
data
```

Out[125]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	1	2020-01-30	6:00 PM	Kerala	1	0
1	2	2020-01-31	6:00 PM	Kerala	1	0
2	3	2020-02-01	6:00 PM	Kerala	2	0
3	4	2020-02-02	6:00 PM	Kerala	3	0
4	5	2020-02-03	6:00 PM	Kerala	3	0
...	...	...	...	...	...	...
16845	16846	2021-07-07	8:00 AM	Telangana	-	-
16846	16847	2021-07-07	8:00 AM	Tripura	-	-
16847	16848	2021-07-07	8:00 AM	Uttarakhand	-	-
16848	16849	2021-07-07	8:00 AM	Uttar Pradesh	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

16850 rows × 9 columns

In [81]:
```
# calculate the mean deaths for each different state/unionterritory in data.
```

In [124]:
```
state_mean=data.groupby('State/UnionTerritory')['Deaths'].mean()
```

In [117]:
```
state_mean
```

Out[117]:
```
State/UnionTerritory
Andaman and Nicobar Islands                      48.238806
Andhra Pradesh                                 5125.913043
Arunachal Pradesh                                41.872017
Assam                                           992.602592
Bihar                                          1605.694268
Bihar****                                      9440.500000
Cases being reassigned to states                  0.000000
Chandigarh                                      250.747899
Chhattisgarh                                   3342.701681
Dadra and Nagar Haveli                            4.000000
Dadra and Nagar Haveli and Daman and Diu          2.051643
Daman & Diu                                       0.000000
Delhi                                          8249.304260
Goa                                             721.447761
Gujarat                                        3930.128421
Haryana                                        2375.912424
Himachal Pradesh                                784.664557
Jammu and Kashmir                              1412.921811
Jharkhand                                      1229.585313
Karnataka                                      9915.674897
Kerala                                         2529.055238
Ladakh                                           79.053279
Lakshadweep                                      10.421053
Madhya Pradesh                                 3012.194093
Maharashtra                                   39741.835391
Manipur                                         259.212314
Meghalaya                                       147.317778
Mizoram                                          10.793617
Nagaland                                         94.532374
Odisha                                         1252.920668
Puducherry                                      523.444444
Punjab                                         4561.183128
Rajasthan                                      2357.363821
Sikkim                                          101.292683
Tamil Nadu                                     9695.956967
Telangana                                      3245.597015
Telengana                                       939.969484
Tripura                                         272.306346
Unassigned                                        0.000000
Uttar Pradesh                                  6818.036660
Uttarakhand                                    1517.733333
West Bengal                                    6739.706499
Name: Deaths, dtype: float64
```

In [118]:
```
state_mean['Tripura']
```

Out[118]:
```
272.30634573304155
```

In [90]:
```
# count the number of each state/uinonterritory in data
```

In [91]:
```
data['State/UnionTerritory'].value_counts()
```

Out[91]:
```
Kerala                                    525
Delhi                                     493
Rajasthan                                 492
Uttar Pradesh                             491
Haryana                                   491
Ladakh                                    488
Tamil Nadu                                488
Maharashtra                               486
Jammu and Kashmir                         486
Punjab                                    486
Karnataka                                 486
Andhra Pradesh                            483
Uttarakhand                               480
Odisha                                    479
Puducherry                                477
West Bengal                               477
Chhattisgarh                              476
Chandigarh                                476
Gujarat                                   475
Himachal Pradesh                          474
Madhya Pradesh                            474
Manipur                                   471
Bihar                                     471
Mizoram                                   470
Andaman and Nicobar Islands               469
Goa                                       469
Assam                                     463
Jharkhand                                 463
Arunachal Pradesh                         461
Tripura                                   457
Meghalaya                                 450
Dadra and Nagar Haveli and Daman and Diu  426
Telengana                                 426
Nagaland                                  417
Sikkim                                    410
Lakshadweep                               209
Telangana                                  67
Cases being reassigned to states           60
Unassigned                                  3
Dadra and Nagar Haveli                      2
Bihar****                                   2
Daman & Diu                                 1
Name: State/UnionTerritory, dtype: int64
```

In [96]:
```
#sort data first by the values in the cured in decending order.
```

In [97]:
```
data.sort_values(by=['Cured'])
```

Out[97]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	1	2020-01-30	6:00 PM	Kerala	1	0
533	534	2020-04-01	7:30 PM	Chandigarh	-	-
1071	1072	2020-04-18	5:00 PM	Jharkhand	-	-
536	537	2020-04-01	7:30 PM	Goa	-	-
2437	2438	2020-05-29	8:00 AM	Nagaland	-	-
...	...	...	...	...	...	...
16690	16691	2021-07-03	8:00 AM	Maharashtra	-	-
16726	16727	2021-07-04	8:00 AM	Maharashtra	-	-
16762	16763	2021-07-05	8:00 AM	Maharashtra	-	-
16798	16799	2021-07-06	8:00 AM	Maharashtra	-	-
16834	16835	2021-07-07	8:00 AM	Maharashtra	-	-

16850 rows × 9 columns

In [ ]:
```
```

In [145]:
```
# select the maximum and minimum values in each state
```

In [146]:
```
data.groupby('State/UnionTerritory').max()
```

Out[146]:

State/UnionTerritory	Sno	Date	Time	ConfirmedIndianNational	ConfirmedForeignNational	Cure
Andaman and Nicobar Islands	16815	2021-07-07	9:30 PM	6	0	734
Andhra Pradesh	16816	2021-07-07	9:30 PM	9	0	186193
Arunachal Pradesh	16817	2021-07-07	8:00 AM	-	-	3452
Assam	16818	2021-07-07	8:00 AM	-	-	49330
Bihar	16819	2021-07-07	9:30 PM	9	0	71191
Bihar****	15883	2021-06-11	8:00 AM	-	-	70123
Cases being reassigned to states	4251	2020-07-18	8:00 AM	-	-	
Chandigarh	16820	2021-07-07	9:30 PM	8	0	6083
Chhattisgarh	16821	2021-07-07	9:30 PM	6	0	97789
Dadra and Nagar Haveli	15670	2021-06-05	8:00 AM	-	-	1026
Dadra and Nagar Haveli and Daman and Diu	16822	2021-07-07	8:00 AM	-	-	1053
Daman & Diu	2891	2020-06-11	8:00 AM	-	-	
Delhi	16823	2021-07-07	9:30 PM	9	1	140885
Goa	16824	2021-07-07	9:30 PM	3	0	16278
Gujarat	16825	2021-07-07	9:30 PM	7	1	81169
Haryana	16826	2021-07-07	9:30 PM	7	2	75844
Himachal Pradesh	16827	2021-07-07	9:30 PM	3	0	19813
Jammu and Kashmir	16828	2021-07-07	9:30 PM	7	0	30955
Jharkhand	16829	2021-07-07	8:00 AM	-	-	34036
Karnataka	16830	2021-07-07	9:30 PM	6	0	278403
Kerala	16831	2021-07-07	9:30 PM	9	8	287755

State/UnionTerritory	Sno	Date	Time	ConfirmedIndianNational	ConfirmedForeignNational	Cure
Ladakh	16832	2021-07-07	9:30 PM	8	0	1973
Lakshadweep	16833	2021-07-07	8:00 AM	-	-	964
Madhya Pradesh	16834	2021-07-07	9:30 PM	7	0	78057
Maharashtra	16835	2021-07-07	9:30 PM	86	3	587226
Manipur	16836	2021-07-07	9:30 PM	1	0	6613
Meghalaya	16837	2021-07-07	8:00 AM	-	-	4717
Mizoram	16838	2021-07-07	9:30 PM	1	0	1838
Nagaland	16839	2021-07-07	8:00 AM	-	-	2398
Odisha	16840	2021-07-07	9:30 PM	3	0	89736
Puducherry	16841	2021-07-07	9:30 PM	1	0	11467
Punjab	16842	2021-07-07	9:30 PM	38	0	57859
Rajasthan	16843	2021-07-07	9:30 PM	52	2	94288
Sikkim	16844	2021-07-07	8:00 AM	-	-	1920
Tamil Nadu	16845	2021-07-07	9:30 PM	7	6	243587
Telangana	16846	2021-07-07	8:00 AM	-	-	61312
Telengana	14434	2021-05-01	9:30 PM	8	9	36216
Tripura	16847	2021-07-07	8:00 AM	-	-	6396
Unassigned	618	2020-04-03	9:30 PM	-	-	
Uttar Pradesh	16849	2021-07-07	9:30 PM	9	1	168213
Uttarakhand	16848	2021-07-07	9:30 PM	4	1	33200
West Bengal	16850	2021-07-07	9:30 PM	9	0	147213

In [133]:
```
data.groupby('State/UnionTerritory').min()
```

Out[133]:

State/UnionTerritory	Sno	Date	Time	ConfirmedIndianNational	ConfirmedForeignNational	C
Andaman and Nicobar Islands	366	2020-03-26	10:00 AM	-	-	
Andhra Pradesh	122	2020-03-12	10:00 AM	-	-	
Arunachal Pradesh	590	2020-04-03	5:00 PM	-	-	
Assam	532	2020-04-01	5:00 PM	-	-	
Bihar	272	2020-03-22	10:00 AM	-	-	
Bihar****	15847	2021-06-10	8:00 AM	-	-	70
Cases being reassigned to states	2134	2020-05-20	8:00 AM	-	-	
Chandigarh	223	2020-03-19	10:00 AM	-	-	
Chhattisgarh	211	2020-03-19	10:00 AM	-	-	
Dadra and Nagar Haveli	15634	2021-06-04	8:00 AM	-	-	1
Dadra and Nagar Haveli and Daman and Diu	1646	2020-05-06	8:00 AM	-	-	
Daman & Diu	2891	2020-06-11	8:00 AM	-	-	
Delhi	35	2020-03-02	10:00 AM	-	-	
Goa	372	2020-03-26	10:00 AM	-	-	
Gujarat	232	2020-03-20	10:00 AM	-	-	
Haryana	42	2020-03-04	10:00 AM	-	-	
Himachal Pradesh	254	2020-03-21	10:00 AM	-	-	
Jammu and Kashmir	82	2020-03-09	10:00 AM	-	-	
Jharkhand	542	2020-04-01	5:00 PM	-	-	
Karnataka	75	2020-03-09	10:00 AM	-	-	
Kerala	1	2020-01-30	10:00 AM	-	-	

State/UnionTerritory	Sno	Date	Time	ConfirmedIndianNational	ConfirmedForeignNational	C
Ladakh	60	2020-03-07	10:00 AM	-	-	
Lakshadweep	9344	2020-12-11	8:00 AM	-	-	
Madhya Pradesh	257	2020-03-21	10:00 AM	-	-	
Maharashtra	77	2020-03-09	10:00 AM	-	-	
Manipur	328	2020-03-24	10:00 AM	-	-	
Meghalaya	947	2020-04-14	5:00 PM	-	-	
Mizoram	353	2020-03-25	10:00 AM	-	-	
Nagaland	916	2020-04-13	5:00 PM	-	-	
Odisha	169	2020-03-16	10:00 AM	-	-	
Puducherry	200	2020-03-18	10:00 AM	-	-	
Punjab	78	2020-03-09	10:00 AM	-	-	
Rajasthan	37	2020-03-03	10:00 AM	-	-	
Sikkim	2264	2020-05-24	8:00 AM	-	-	
Tamil Nadu	62	2020-03-07	10:00 AM	-	-	
Telangana	14470	2021-05-02	8:00 AM	-	-	36
Telengana	33	2020-03-02	10:00 AM	-	-	
Tripura	736	2020-04-07	5:00 PM	-	-	
Unassigned	501	2020-03-30	6:00 PM	-	-	
Uttar Pradesh	40	2020-03-04	10:00 AM	-	-	
Uttarakhand	162	2020-03-15	10:00 AM	-	-	
West Bengal	209	2020-03-18	10:00 AM	-	-	

In [137]:
```
data['Deaths'].max()
```

Out[137]:
```
123531
```

In [138]:
```
data['Deaths'].min()
```

Out[138]:
```
0
```

In [150]:
```
# select state only 'west bengal' in data
```

In [148]:
```
West_Bengal=data[data['State/UnionTerritory']=='West Bengal']
```

In [149]:
```
West_Bengal
```

Out[149]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
208	209	2020-03-18	6:00 PM	West Bengal	1	0
227	228	2020-03-19	6:00 PM	West Bengal	1	0
247	248	2020-03-20	6:00 PM	West Bengal	2	0
269	270	2020-03-21	6:00 PM	West Bengal	3	0
292	293	2020-03-22	6:00 PM	West Bengal	4	0
...	...	...	...	...	...	...
16705	16706	2021-07-03	8:00 AM	West Bengal	-	-
16741	16742	2021-07-04	8:00 AM	West Bengal	-	-
16777	16778	2021-07-05	8:00 AM	West Bengal	-	-
16813	16814	2021-07-06	8:00 AM	West Bengal	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

477 rows × 9 columns

In [152]:
```
# select the state 'west bengal' and 'punjab' in data
```

In [153]:
```
data[(data['State/UnionTerritory']=='West Bengal')|(data['State/UnionTerritory']=
```

Out[153]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
77	78	2020-03-09	6:00 PM	Punjab	1	0
92	93	2020-03-10	6:00 PM	Punjab	1	0
107	108	2020-03-11	6:00 PM	Punjab	1	0
118	119	2020-03-12	6:00 PM	Punjab	1	0
131	132	2020-03-13	6:00 PM	Punjab	1	0
...	...	...	...	...	...	...
16777	16778	2021-07-05	8:00 AM	West Bengal	-	-
16805	16806	2021-07-06	8:00 AM	Punjab	-	-
16813	16814	2021-07-06	8:00 AM	West Bengal	-	-
16841	16842	2021-07-07	8:00 AM	Punjab	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

963 rows × 9 columns

In [19]:
```
# select the date data first 7 rows.
```

In [5]:
```
data['Date'].head(7)
```

Out[5]:
```
0    2020-01-30
1    2020-01-31
2    2020-02-01
3    2020-02-02
4    2020-02-03
5    2020-02-04
6    2020-02-05
Name: Date, dtype: object
```

In [20]:
```
# select the rows there 'Deaths'is equal to 1000 in data.
```

In [7]:
```
data[data['Deaths']>1000]
```

Out[7]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
1954	1955	2020-05-15	8:00 AM	Maharashtra	-	-
1987	1988	2020-05-16	8:00 AM	Maharashtra	-	-
2020	2021	2020-05-17	8:00 AM	Maharashtra	-	-
2053	2054	2020-05-18	8:00 AM	Maharashtra	-	-
2086	2087	2020-05-19	8:00 AM	Maharashtra	-	-
...	...	...	...	...	...	...
16844	16845	2021-07-07	8:00 AM	Tamil Nadu	-	-
16845	16846	2021-07-07	8:00 AM	Telangana	-	-
16847	16848	2021-07-07	8:00 AM	Uttarakhand	-	-
16848	16849	2021-07-07	8:00 AM	Uttar Pradesh	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

6859 rows × 9 columns

In [21]:
```
# select the rows there 'Date' is 2020-05-15 in data.
```

In [15]:
```
data[data['Date']=='2020-05-15']
```

Out[15]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	C
1935	1936	2020-05-15	8:00 AM	Andaman and Nicobar Islands	-	-	
1936	1937	2020-05-15	8:00 AM	Andhra Pradesh	-	-	
1937	1938	2020-05-15	8:00 AM	Arunachal Pradesh	-	-	
1938	1939	2020-05-15	8:00 AM	Assam	-	-	
1939	1940	2020-05-15	8:00 AM	Bihar	-	-	
1940	1941	2020-05-15	8:00 AM	Chandigarh	-	-	
1941	1942	2020-05-15	8:00 AM	Chhattisgarh	-	-	
1942	1943	2020-05-15	8:00 AM	Dadra and Nagar Haveli and Daman and Diu	-	-	
1943	1944	2020-05-15	8:00 AM	Delhi	-	-	
1944	1945	2020-05-15	8:00 AM	Goa	-	-	
1945	1946	2020-05-15	8:00 AM	Gujarat	-	-	
1946	1947	2020-05-15	8:00 AM	Haryana	-	-	
1947	1948	2020-05-15	8:00 AM	Himachal Pradesh	-	-	
1948	1949	2020-05-15	8:00 AM	Jammu and Kashmir	-	-	
1949	1950	2020-05-15	8:00 AM	Jharkhand	-	-	
1950	1951	2020-05-15	8:00 AM	Karnataka	-	-	
1951	1952	2020-05-15	8:00 AM	Kerala	-	-	
1952	1953	2020-05-15	8:00 AM	Ladakh	-	-	
1953	1954	2020-05-15	8:00 AM	Madhya Pradesh	-	-	
1954	1955	2020-05-15	8:00 AM	Maharashtra	-	-	
1955	1956	2020-05-15	8:00 AM	Manipur	-	-	
1956	1957	2020-05-15	8:00 AM	Meghalaya	-	-	

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	C
1957	1958	2020-05-15	8:00 AM	Mizoram	-	-	
1958	1959	2020-05-15	8:00 AM	Odisha	-	-	
1959	1960	2020-05-15	8:00 AM	Puducherry	-	-	
1960	1961	2020-05-15	8:00 AM	Punjab	-	-	
1961	1962	2020-05-15	8:00 AM	Rajasthan	-	-	
1962	1963	2020-05-15	8:00 AM	Tamil Nadu	-	-	
1963	1964	2020-05-15	8:00 AM	Telengana	-	-	
1964	1965	2020-05-15	8:00 AM	Tripura	-	-	
1965	1966	2020-05-15	8:00 AM	Uttarakhand	-	-	
1966	1967	2020-05-15	8:00 AM	Uttar Pradesh	-	-	
1967	1968	2020-05-15	8:00 AM	West Bengal	-	-	

In [22]:
```
# calculate the mean 'confirmed' for each different 'date'.
```

In [12]:
```
data.groupby('Date')['Confirmed'].mean()
```

Out[12]:
```
Date
2020-01-30         1.000000
2020-01-31         1.000000
2020-02-01         2.000000
2020-02-02         3.000000
2020-02-03         3.000000
                    ...
2021-07-03    847287.833333
2021-07-04    848484.250000
2021-07-05    849589.694444
2021-07-06    850553.666667
2021-07-07    851768.472222
Name: Confirmed, Length: 525, dtype: float64
```

In [23]:
```
# select only the rows where the 'state/unionterritory' is delhi.
```

In [16]:
```
Delhi=data[data['State/UnionTerritory']=='Delhi']
```

In [17]:
```
Delhi
```

Out[17]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
34	35	2020-03-02	6:00 PM	Delhi	1	0
38	39	2020-03-03	6:00 PM	Delhi	1	0
42	43	2020-03-04	6:00 PM	Delhi	1	0
45	46	2020-03-05	6:00 PM	Delhi	2	0
51	52	2020-03-06	6:00 PM	Delhi	3	0
...	...	...	...	...	...	...
16678	16679	2021-07-03	8:00 AM	Delhi	-	-
16714	16715	2021-07-04	8:00 AM	Delhi	-	-
16750	16751	2021-07-05	8:00 AM	Delhi	-	-
16786	16787	2021-07-06	8:00 AM	Delhi	-	-
16822	16823	2021-07-07	8:00 AM	Delhi	-	-

493 rows × 9 columns

In [24]:
```
# select only the rows where the 'date' are '2020-07-01' and '2020-08-30' in data
```

In [25]:
```
Delhi[(Delhi['Date']>'2020-07-01')|(Delhi['Date']<'2020-08-30')]
```

Out[25]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
34	35	2020-03-02	6:00 PM	Delhi	1	0
38	39	2020-03-03	6:00 PM	Delhi	1	0
42	43	2020-03-04	6:00 PM	Delhi	1	0
45	46	2020-03-05	6:00 PM	Delhi	2	0
51	52	2020-03-06	6:00 PM	Delhi	3	0
...	...	...	...	...	...	...
16678	16679	2021-07-03	8:00 AM	Delhi	-	-
16714	16715	2021-07-04	8:00 AM	Delhi	-	-
16750	16751	2021-07-05	8:00 AM	Delhi	-	-
16786	16787	2021-07-06	8:00 AM	Delhi	-	-
16822	16823	2021-07-07	8:00 AM	Delhi	-	-

493 rows × 9 columns

In [36]:
```
# SELECT THE ROWS ONLY "TIME" IN 5:00PM AND 6:00PM
```

In [35]:
```
Delhi[(Delhi['Time']=='5:00 PM')|(Delhi['Time']=='6:00 PM')]
```

Out[35]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	C
34	35	2020-03-02	6:00 PM	Delhi	1	0	
38	39	2020-03-03	6:00 PM	Delhi	1	0	
42	43	2020-03-04	6:00 PM	Delhi	1	0	
45	46	2020-03-05	6:00 PM	Delhi	2	0	
51	52	2020-03-06	6:00 PM	Delhi	3	0	
62	63	2020-03-07	6:00 PM	Delhi	3	0	
71	72	2020-03-08	6:00 PM	Delhi	3	0	
84	85	2020-03-09	6:00 PM	Delhi	4	0	
87	88	2020-03-10	6:00 PM	Delhi	4	0	
98	99	2020-03-11	6:00 PM	Delhi	5	0	
109	110	2020-03-12	6:00 PM	Delhi	6	0	
122	123	2020-03-13	6:00 PM	Delhi	6	0	
135	136	2020-03-14	6:00 PM	Delhi	7	0	
149	150	2020-03-15	6:00 PM	Delhi	7	0	
163	164	2020-03-16	6:00 PM	Delhi	7	0	
178	179	2020-03-17	6:00 PM	Delhi	8	0	
193	194	2020-03-18	6:00 PM	Delhi	9	1	
211	212	2020-03-19	6:00 PM	Delhi	11	1	
230	231	2020-03-20	6:00 PM	Delhi	16	1	
250	251	2020-03-21	6:00 PM	Delhi	25	1	
273	274	2020-03-22	6:00 PM	Delhi	28	1	
296	297	2020-03-23	6:00 PM	Delhi	28	1	

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	C
319	320	2020-03-24	6:00 PM	Delhi	29	1	
343	344	2020-03-25	6:00 PM	Delhi	30	1	
370	371	2020-03-26	6:00 PM	Delhi	35	1	
424	425	2020-03-28	6:00 PM	Delhi	38	1	
564	565	2020-04-02	6:00 PM	Delhi	-	-	
594	595	2020-04-03	6:00 PM	Delhi	-	-	
625	626	2020-04-04	6:00 PM	Delhi	-	-	
655	656	2020-04-05	6:00 PM	Delhi	-	-	
685	686	2020-04-06	6:00 PM	Delhi	-	-	
715	716	2020-04-07	6:00 PM	Delhi	-	-	
746	747	2020-04-08	5:00 PM	Delhi	-	-	
777	778	2020-04-09	5:00 PM	Delhi	-	-	
808	809	2020-04-10	5:00 PM	Delhi	-	-	
839	840	2020-04-11	5:00 PM	Delhi	-	-	
870	871	2020-04-12	5:00 PM	Delhi	-	-	
901	902	2020-04-13	5:00 PM	Delhi	-	-	
933	934	2020-04-14	5:00 PM	Delhi	-	-	
966	967	2020-04-15	5:00 PM	Delhi	-	-	
999	1000	2020-04-16	5:00 PM	Delhi	-	-	
1032	1033	2020-04-17	5:00 PM	Delhi	-	-	
1065	1066	2020-04-18	5:00 PM	Delhi	-	-	
1098	1099	2020-04-19	5:00 PM	Delhi	-	-	
1131	1132	2020-04-20	5:00 PM	Delhi	-	-	

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	C
1164	1165	2020-04-21	5:00 PM	Delhi	-	-	
1197	1198	2020-04-22	5:00 PM	Delhi	-	-	
1229	1230	2020-04-23	5:00 PM	Delhi	-	-	
1261	1262	2020-04-24	5:00 PM	Delhi	-	-	
1293	1294	2020-04-25	5:00 PM	Delhi	-	-	
1325	1326	2020-04-26	5:00 PM	Delhi	-	-	
1357	1358	2020-04-27	5:00 PM	Delhi	-	-	
1389	1390	2020-04-28	5:00 PM	Delhi	-	-	
1421	1422	2020-04-29	5:00 PM	Delhi	-	-	
1453	1454	2020-04-30	5:00 PM	Delhi	-	-	
1485	1486	2020-05-01	5:00 PM	Delhi	-	-	
1517	1518	2020-05-02	5:00 PM	Delhi	-	-	
1549	1550	2020-05-03	5:00 PM	Delhi	-	-	
1581	1582	2020-05-04	5:00 PM	Delhi	-	-	
1613	1614	2020-05-05	5:00 PM	Delhi	-	-	

In [38]:
```
# select the rows 'state/unionterritory'are 'ladakh' and 'meghalaya'.
```

In [39]:
```
data[(data['State/UnionTerritory']=='Ladakh')|(data['State/UnionTerritory']=='Meg
```

Out[39]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
59	60	2020-03-07	6:00 PM	Ladakh	2	0
65	66	2020-03-08	6:00 PM	Ladakh	2	0
73	74	2020-03-09	6:00 PM	Ladakh	2	0
86	87	2020-03-10	6:00 PM	Ladakh	2	0
104	105	2020-03-11	6:00 PM	Ladakh	2	0
...	...	...	...	...	...	...
16764	16765	2021-07-05	8:00 AM	Meghalaya	-	-
16795	16796	2021-07-06	8:00 AM	Ladakh	-	-
16800	16801	2021-07-06	8:00 AM	Meghalaya	-	-
16831	16832	2021-07-07	8:00 AM	Ladakh	-	-
16836	16837	2021-07-07	8:00 AM	Meghalaya	-	-

938 rows × 9 columns

In [44]:
```
# select the rows only 'deaths'is equal to 0.
```

In [43]:
```
data[data['Deaths']==0]
```

Out[43]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	1	2020-01-30	6:00 PM	Kerala	1	0
1	2	2020-01-31	6:00 PM	Kerala	1	0
2	3	2020-02-01	6:00 PM	Kerala	2	0
3	4	2020-02-02	6:00 PM	Kerala	3	0
4	5	2020-02-03	6:00 PM	Kerala	3	0
...	...	...	...	...	...	...
11935	11936	2021-02-21	8:00 AM	Lakshadweep	-	-
11971	11972	2021-02-22	8:00 AM	Lakshadweep	-	-
12007	12008	2021-02-23	8:00 AM	Lakshadweep	-	-
12043	12044	2021-02-24	8:00 AM	Lakshadweep	-	-
12079	12080	2021-02-25	8:00 AM	Lakshadweep	-	-

1718 rows × 9 columns

In [46]:
```
# sort data by 'state/unionterritory'
```

In [4]:
```
data.sort_values(by='State/UnionTerritory')
```

Out[4]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
7891	7892	2020-10-31	8:00 AM	Andaman and Nicobar Islands	-	-
7366	7367	2020-10-16	8:00 AM	Andaman and Nicobar Islands	-	-
8451	8452	2020-11-16	8:00 AM	Andaman and Nicobar Islands	-	-
6176	6177	2020-09-12	8:00 AM	Andaman and Nicobar Islands	-	-
13251	13252	2021-03-30	8:00 AM	Andaman and Nicobar Islands	-	-
...	...	...	...	...	...	...
9255	9256	2020-12-08	8:00 AM	West Bengal	-	-
4213	4214	2020-07-17	8:00 AM	West Bengal	-	-
315	316	2020-03-23	6:00 PM	West Bengal	7	0
15445	15446	2021-05-29	8:00 AM	West Bengal	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

16850 rows × 9 columns

In [11]:
```
# converted date into datetime format.
```

In [31]:
```
datess=data['Date']
```

In [32]:
```
datess
```

Out[32]:
```
0        2020-01-30
1        2020-01-31
2        2020-02-01
3        2020-02-02
4        2020-02-03
            ...
16845    2021-07-07
16846    2021-07-07
16847    2021-07-07
16848    2021-07-07
16849    2021-07-07
Name: Date, Length: 16850, dtype: object
```

In [33]:
```
def years(datess):
    import datetime
    return datetime.datetime.strptime(datess,"%Y-%m-%d")
```

In [34]:
```
data["Date"]=data['Date'].apply(years)
```

In [87]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 16850 entries, 0 to 16849
Data columns (total 9 columns):
 #   Column                    Non-Null Count  Dtype
---  ------                    --------------  -----
 0   Sno                       16850 non-null  int64
 1   Date                      16850 non-null  datetime64[ns]
 2   Time                      16850 non-null  object
 3   State/UnionTerritory      16850 non-null  object
 4   ConfirmedIndianNational   16850 non-null  object
 5   ConfirmedForeignNational  16850 non-null  object
 6   Cured                     16850 non-null  int64
 7   Deaths                    16850 non-null  int64
 8   Confirmed                 16850 non-null  int64
dtypes: datetime64[ns](1), int64(4), object(4)
memory usage: 1.2+ MB
```

In [37]:
```
#data[(data["State/UnionTerritory"]=="Maharashtra")&(data["Date"]=="%m")]
```

Out[37]:

Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	Cured

In [ ]:
```

```

In [26]:
```
data
```

Out[26]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	1	2020-01-30	6:00 PM	Kerala	1	0
1	2	2020-01-31	6:00 PM	Kerala	1	0
2	3	2020-02-01	6:00 PM	Kerala	2	0
3	4	2020-02-02	6:00 PM	Kerala	3	0
4	5	2020-02-03	6:00 PM	Kerala	3	0
...	...	...	...	...	...	...
16845	16846	2021-07-07	8:00 AM	Telangana	-	-
16846	16847	2021-07-07	8:00 AM	Tripura	-	-
16847	16848	2021-07-07	8:00 AM	Uttarakhand	-	-
16848	16849	2021-07-07	8:00 AM	Uttar Pradesh	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

16850 rows × 9 columns

In [ ]:
```

```

In [29]:
```
data.groupby('Date').agg(['count','min','max','sum'])
```

Out[29]:

	Sno				Time				State/UnionTerritory			
	count	min	max	sum	count	min	max	sum	count	min	...	max
Date												
2020-01-30	1	1	1	1	1	6:00 PM	6:00 PM	6:00 PM	1	Kerala	...	0
2020-01-31	1	2	2	2	1	6:00 PM	6:00 PM	6:00 PM	1	Kerala	...	0
2020-02-01	1	3	3	3	1	6:00 PM	6:00 PM	6:00 PM	1	Kerala	...	0
2020-02-02	1	4	4	4	1	6:00 PM	6:00 PM	6:00 PM	1	Kerala	...	0
2020-02-03	1	5	5	5	1	6:00 PM	6:00 PM	6:00 PM	1	Kerala	...	0
...	...	...	...	...	...	...	...	...	...	...	...	...
2021-07-03	36	16671	16706	600786	36	8:00 AM	8:00 AM	8:00 AM8:00 AM8:00 AM8:00 AM8:00 AM8:00...	36	Andaman and Nicobar Islands	...	5836920
2021-07-04	36	16707	16742	602082	36	8:00 AM	8:00 AM	8:00 AM8:00 AM8:00 AM8:00 AM8:00 AM8:00...	36	Andaman and Nicobar Islands	...	5845315
2021-07-05	36	16743	16778	603378	36	8:00 AM	8:00 AM	8:00 AM8:00 AM8:00 AM8:00 AM8:00 AM8:00...	36	Andaman and Nicobar Islands	...	5848693
2021-07-06	36	16779	16814	604674	36	8:00 AM	8:00 AM	8:00 AM8:00 AM8:00 AM8:00 AM8:00 AM8:00...	36	Andaman and Nicobar Islands	...	5861720
2021-07-07	36	16815	16850	605970	36	8:00 AM	8:00 AM	8:00 AM8:00 AM8:00 AM8:00 AM8:00 AM8:00...	36	Andaman and Nicobar Islands	...	5872268

525 rows × 32 columns

In [37]:
```
# select the date column
```

In [88]:
```
years=data['Date']
```

In [89]:
```
years
```

Out[89]:
```
0       2020-01-30
1       2020-01-31
2       2020-02-01
3       2020-02-02
4       2020-02-03
              ...
16845   2021-07-07
16846   2021-07-07
16847   2021-07-07
16848   2021-07-07
16849   2021-07-07
Name: Date, Length: 16850, dtype: datetime64[ns]
```

In [105]:
```
data
```

Out[105]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	1	2020-01-30	6:00 PM	Kerala	1	0
1	2	2020-01-31	6:00 PM	Kerala	1	0
2	3	2020-02-01	6:00 PM	Kerala	2	0
3	4	2020-02-02	6:00 PM	Kerala	3	0
4	5	2020-02-03	6:00 PM	Kerala	3	0
...	...	...	...	...	...	...
16845	16846	2021-07-07	8:00 AM	Telangana	-	-
16846	16847	2021-07-07	8:00 AM	Tripura	-	-
16847	16848	2021-07-07	8:00 AM	Uttarakhand	-	-
16848	16849	2021-07-07	8:00 AM	Uttar Pradesh	-	-
16849	16850	2021-07-07	8:00 AM	West Bengal	-	-

16850 rows × 9 columns

In [112]:
```
# converted the coiumn type from string to datetime format in pandas dataframe.
```

In [109]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 16850 entries, 0 to 16849
Data columns (total 9 columns):
 #   Column                    Non-Null Count  Dtype 
---  ------                    --------------  ----- 
 0   Sno                       16850 non-null  int64 
 1   Date                      16850 non-null  object
 2   Time                      16850 non-null  object
 3   State/UnionTerritory      16850 non-null  object
 4   ConfirmedIndianNational   16850 non-null  object
 5   ConfirmedForeignNational  16850 non-null  object
 6   Cured                     16850 non-null  int64 
 7   Deaths                    16850 non-null  int64 
 8   Confirmed                 16850 non-null  int64 
dtypes: int64(4), object(5)
memory usage: 1.2+ MB
```

In [24]:
```
data['Date']=pd.to_datetime(data['Date'])
```

In [111]:
```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 16850 entries, 0 to 16849
Data columns (total 9 columns):
 #   Column                    Non-Null Count  Dtype         
---  ------                    --------------  -----         
 0   Sno                       16850 non-null  int64         
 1   Date                      16850 non-null  datetime64[ns]
 2   Time                      16850 non-null  object        
 3   State/UnionTerritory      16850 non-null  object        
 4   ConfirmedIndianNational   16850 non-null  object        
 5   ConfirmedForeignNational  16850 non-null  object        
 6   Cured                     16850 non-null  int64         
 7   Deaths                    16850 non-null  int64         
 8   Confirmed                 16850 non-null  int64         
dtypes: datetime64[ns](1), int64(4), object(4)
memory usage: 1.2+ MB
```

In [117]:
```
# how to randomly select rows from pandas dataframe.
```

In [118]:
```
data.sample()
```

Out[118]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	C
4293	4294	2020-07-20	8:00 AM	Dadra and Nagar Haveli and Daman and Diu	-	-	

In [121]:
```
data.sample(n=3)
```

Out[121]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
15659	15660	2021-06-04	8:00 AM	Uttarakhand	-	-
2465	2466	2020-05-30	8:00 AM	Karnataka	-	-
2370	2371	2020-05-27	8:00 AM	Sikkim	-	-

In [9]:
```
# select data maharashtra from dataframe.
```

In [4]:
```
maha=data[data['State/UnionTerritory']=='Maharashtra']
```

In [5]:
```
maha
```

Out[5]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
76	77	2020-03-09	6:00 PM	Maharashtra	2	0
91	92	2020-03-10	6:00 PM	Maharashtra	5	0
97	98	2020-03-11	6:00 PM	Maharashtra	2	0
120	121	2020-03-12	6:00 PM	Maharashtra	11	0
133	134	2020-03-13	6:00 PM	Maharashtra	14	0
...	...	...	...	...	...	...
16690	16691	2021-07-03	8:00 AM	Maharashtra	-	-
16726	16727	2021-07-04	8:00 AM	Maharashtra	-	-
16762	16763	2021-07-05	8:00 AM	Maharashtra	-	-
16798	16799	2021-07-06	8:00 AM	Maharashtra	-	-
16834	16835	2021-07-07	8:00 AM	Maharashtra	-	-

486 rows × 9 columns

In [22]:
```
july=maha[(maha["Date"]>="2020-07-01")&(maha["Date"]<="2020-07-31")]
```

In [23]:
```
july
```

Out[23]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	
3622	3623	2020-07-01	8:00 AM	Maharashtra	-	-	
3658	3659	2020-07-02	8:00 AM	Maharashtra	-	-	
3694	3695	2020-07-03	8:00 AM	Maharashtra	-	-	1
3730	3731	2020-07-04	8:00 AM	Maharashtra	-	-	1
3766	3767	2020-07-05	8:00 AM	Maharashtra	-	-	1
3802	3803	2020-07-06	8:00 AM	Maharashtra	-	-	1
3838	3839	2020-07-07	8:00 AM	Maharashtra	-	-	1
3874	3875	2020-07-08	8:00 AM	Maharashtra	-	-	1
3910	3911	2020-07-09	8:00 AM	Maharashtra	-	-	1
3946	3947	2020-07-10	8:00 AM	Maharashtra	-	-	1
3982	3983	2020-07-11	8:00 AM	Maharashtra	-	-	1
4018	4019	2020-07-12	8:00 AM	Maharashtra	-	-	1
4054	4055	2020-07-13	8:00 AM	Maharashtra	-	-	1
4090	4091	2020-07-14	8:00 AM	Maharashtra	-	-	1
4126	4127	2020-07-15	8:00 AM	Maharashtra	-	-	1
4162	4163	2020-07-16	8:00 AM	Maharashtra	-	-	1
4198	4199	2020-07-17	8:00 AM	Maharashtra	-	-	1
4234	4235	2020-07-18	8:00 AM	Maharashtra	-	-	1
4270	4271	2020-07-19	8:00 AM	Maharashtra	-	-	1
4305	4306	2020-07-20	8:00 AM	Maharashtra	-	-	1
4340	4341	2020-07-21	8:00 AM	Maharashtra	-	-	1
4375	4376	2020-07-22	8:00 AM	Maharashtra	-	-	1

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational	
4410	4411	2020-07-23	8:00 AM	Maharashtra	-	-	1
4445	4446	2020-07-24	8:00 AM	Maharashtra	-	-	1
4480	4481	2020-07-25	8:00 AM	Maharashtra	-	-	1
4515	4516	2020-07-26	8:00 AM	Maharashtra	-	-	2
4550	4551	2020-07-27	8:00 AM	Maharashtra	-	-	2
4585	4586	2020-07-28	8:00 AM	Maharashtra	-	-	2
4620	4621	2020-07-29	8:00 AM	Maharashtra	-	-	2
4655	4656	2020-07-30	8:00 AM	Maharashtra	-	-	2
4690	4691	2020-07-31	8:00 AM	Maharashtra	-	-	2

In [6]:
```
maha["Cured"].sum()
```

Out[6]: 813788907

In [7]:
```
maha["Deaths"].sum()
```

Out[7]: 19314532

In [8]:
```
maha["Confirmed"].sum()
```

Out[8]: 908892470

In [ ]:
```

```