In [1]:

```python
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

In [2]:

```python
df=pd.read_csv(r'D:\Aman\python library\datasets\covid_19_india.csv')
df
```

Out[2]:

	Sno	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNa
0	1	30-01-2020	6:00 PM	Kerala	1	
1	2	31-01-2020	6:00 PM	Kerala	1	
2	3	01-02-2020	6:00 PM	Kerala	2	
3	4	02-02-2020	6:00 PM	Kerala	3	
4	5	03-02-2020	6:00 PM	Kerala	3	
...	...	...	...	...	...	
18105	18106	11-08-2021	8:00 AM	Telangana	6	
18106	18107	11-08-2021	8:00 AM	Tripura	29	
18107	18108	11-08-2021	8:00 AM	Uttarakhand	36	
18108	18109	11-08-2021	8:00 AM	Uttar Pradesh	67	
18109	18110	11-08-2021	8:00 AM	West Bengal	51	

18110 rows × 9 columns

In [3]:

```python
df.isnull().sum()
```

Out[3]:

```
Sno                          0
Date                         0
Time                         0
State/UnionTerritory         0
ConfirmedIndianNational      0
ConfirmedForeignNational     0
Cured                        0
Deaths                       0
Confirmed                    0
dtype: int64
```

In [3]:

```python
df.isnull().sum()
```

Out[3]:

```
Sno                          0
```

In [4]:

```python
a=df.drop('Sno',axis=1)
a
```

Out[4]:

	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	30-01-2020	6:00 PM	Kerala	1	0
1	31-01-2020	6:00 PM	Kerala	1	0
2	01-02-2020	6:00 PM	Kerala	2	0
3	02-02-2020	6:00 PM	Kerala	3	0
4	03-02-2020	6:00 PM	Kerala	3	0
...	...	...	...	...	...
18105	11-08-2021	8:00 AM	Telangana	6	57
18106	11-08-2021	8:00 AM	Tripura	29	39
18107	11-08-2021	8:00 AM	Uttarakhand	36	29
18108	11-08-2021	8:00 AM	Uttar Pradesh	67	23
18109	11-08-2021	8:00 AM	West Bengal	51	24

18110 rows × 8 columns

In [5]:

```python
new=a['Date']=pd.to_datetime(a['Date'])
new
```

    cache_array = _maybe_cache(arg, format, cache, convert_listlike)
C:\Users\Honey\anaconda3\lib\site-packages\pandas\core\tools\datetimes.
py:1047: UserWarning: Parsing '14-08-2020' in DD/MM/YYYY format. Provid
e format or specify infer_datetime_format=True for consistent parsing.
    cache_array = _maybe_cache(arg, format, cache, convert_listlike)
C:\Users\Honey\anaconda3\lib\site-packages\pandas\core\tools\datetimes.
py:1047: UserWarning: Parsing '15-08-2020' in DD/MM/YYYY format. Provid
e format or specify infer_datetime_format=True for consistent parsing.
    cache_array = _maybe_cache(arg, format, cache, convert_listlike)
C:\Users\Honey\anaconda3\lib\site-packages\pandas\core\tools\datetimes.
py:1047: UserWarning: Parsing '16-08-2020' in DD/MM/YYYY format. Provid
e format or specify infer_datetime_format=True for consistent parsing.
    cache_array = _maybe_cache(arg, format, cache, convert_listlike)
C:\Users\Honey\anaconda3\lib\site-packages\pandas\core\tools\datetimes.
py:1047: UserWarning: Parsing '17-08-2020' in DD/MM/YYYY format. Provid
e format or specify infer_datetime_format=True for consistent parsing.
    cache_array = _maybe_cache(arg, format, cache, convert_listlike)
C:\Users\Honey\anaconda3\lib\site-packages\pandas\core\tools\datetimes.
py:1047: UserWarning: Parsing '18-08-2020' in DD/MM/YYYY format. Provid
e format or specify infer_datetime_format=True for consistent parsing.
```

In [6]:

```
a
```

Out[6]:

	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	2020-01-30	6:00 PM	Kerala	1	0
1	2020-01-31	6:00 PM	Kerala	1	0
2	2020-01-02	6:00 PM	Kerala	2	0
3	2020-02-02	6:00 PM	Kerala	3	0
4	2020-03-02	6:00 PM	Kerala	3	0
...	...	...	...	...	...
18105	2021-11-08	8:00 AM	Telangana	6	57
18106	2021-11-08	8:00 AM	Tripura	29	39
18107	2021-11-08	8:00 AM	Uttarakhand	36	29
18108	2021-11-08	8:00 AM	Uttar Pradesh	67	23
18109	2021-11-08	8:00 AM	West Bengal	51	24

18110 rows × 8 columns

In [7]:

```
a['Year']=new.dt.year
a
```

Out[7]:

	Date	Time	State/UnionTerritory	ConfirmedIndianNational	ConfirmedForeignNational
0	2020-01-30	6:00 PM	Kerala	1	0
1	2020-01-31	6:00 PM	Kerala	1	0
2	2020-01-02	6:00 PM	Kerala	2	0
3	2020-02-02	6:00 PM	Kerala	3	0
4	2020-03-02	6:00 PM	Kerala	3	0
...	...	...	...	...	...
18105	2021-11-08	8:00 AM	Telangana	6	57
18106	2021-11-08	8:00 AM	Tripura	29	39
18107	2021-11-08	8:00 AM	Uttarakhand	36	29
18108	2021-11-08	8:00 AM	Uttar Pradesh	67	23
18109	2021-11-08	8:00 AM	West Bengal	51	24

18110 rows × 9 columns

In [8]:

```
newdata=a.drop(['Date','Time','ConfirmedIndianNational','ConfirmedForeignNational'],axis
newdata
```

Out[8]:

	State/UnionTerritory	Cured	Deaths	Confirmed	Year
0	Kerala	0	0	1	2020
1	Kerala	0	0	1	2020
2	Kerala	0	0	2	2020
3	Kerala	0	0	3	2020
4	Kerala	0	0	3	2020
...	...	...	...	...	...
18105	Telangana	638410	3831	650353	2021
18106	Tripura	77811	773	80660	2021
18107	Uttarakhand	334650	7368	342462	2021
18108	Uttar Pradesh	1685492	22775	1708812	2021
18109	West Bengal	1506532	18252	1534999	2021

18110 rows × 5 columns

In [9]:

```python
nd=newdata.groupby('State/UnionTerritory').sum().drop('Year',axis=1)
nd
```

Out[9]:

State/UnionTerritory	Cured	Deaths	Confirmed
Andaman and Nicobar Islands	1848286	27136	1938498
Andhra Pradesh	370426530	2939367	392432753
Arunachal Pradesh	6588149	26799	7176907
Assam	92678680	638323	99837011
Bihar	125122902	1093466	132231166
Bihar****	1402468	18881	1430909
Cases being reassigned to states	0	0	345565
Chandigarh	10117035	147694	10858627
Chhattisgarh	151609364	2063920	163776262
Dadra and Nagar Haveli	20352	8	20722
Dadra and Nagar Haveli and Daman and Diu	1841750	1014	1938632
Daman & Diu	0	0	2
Delhi	273419887	4943294	287227765
Goa	26027201	447801	28240159
Gujarat	132487127	2219448	143420082
Haryana	126585342	1502799	134347285
Himachal Pradesh	27501110	491348	30033289
Himanchal Pradesh	200040	3507	204516
Jammu and Kashmir	53297341	839694	58117726
Jharkhand	58034506	748641	62111994
Karanataka	2821491	36197	2885238
Karnataka	441844360	6053762	485970693
Kerala	420174235	1888177	458906023
Ladakh	3758960	45804	4054293
Lakshadweep	820925	3908	915784
Madhya Pradesh	126724997	1777752	135625265
Madhya Pradesh***	780735	10506	791656
Maharashtra	1018765039	23737432	1121491467
Maharashtra***	6000911	130753	6229596
Manipur	11230568	173056	12617943
Meghalaya	6537909	101950	7355969
Mizoram	2384602	9791	2984732
Nagaland	4519526	58460	5041742
Odisha	150923455	790814	160130533
Puducherry	18483117	312155	20065891
Punjab	91458159	2785594	99949702

State/UnionTerritory	Cured	Deaths	Confirmed
Rajasthan	150356820	1473089	162369656
Sikkim	2747214	53150	3186799
Tamil Nadu	404095807	5916658	431928644
Telangana	57488245	349648	60571979
Telengana	64666267	400427	69990668
Tripura	12976846	150342	14050250
Unassigned	0	0	161
Uttar Pradesh	291479351	4143450	312625843
Uttarakhand	48362741	986001	53140414
West Bengal	247515102	3846989	263107876

In [10]:

```python
an=nd.sort_values(by='Cured',ascending=False)
an
```

Out[10]:

State/UnionTerritory	Cured	Deaths	Confirmed
Maharashtra	1018765039	23737432	1121491467
Karnataka	441844360	6053762	485970693
Kerala	420174235	1888177	458906023
Tamil Nadu	404095807	5916658	431928644
Andhra Pradesh	370426530	2939367	392432753
Uttar Pradesh	291479351	4143450	312625843
Delhi	273419887	4943294	287227765
West Bengal	247515102	3846989	263107876
Chhattisgarh	151609364	2063920	163776262
Odisha	150923455	790814	160130533
Rajasthan	150356820	1473089	162369656
Gujarat	132487127	2219448	143420082
Madhya Pradesh	126724997	1777752	135625265
Haryana	126585342	1502799	134347285
Bihar	125122902	1093466	132231166
Assam	92678680	638323	99837011
Punjab	91458159	2785594	99949702
Telengana	64666267	400427	69990668
Jharkhand	58034506	748641	62111994
Telangana	57488245	349648	60571979
Jammu and Kashmir	53297341	839694	58117726
Uttarakhand	48362741	986001	53140414
Himachal Pradesh	27501110	491348	30033289
Goa	26027201	447801	28240159
Puducherry	18483117	312155	20065891
Tripura	12976846	150342	14050250
Manipur	11230568	173056	12617943
Chandigarh	10117035	147694	10858627
Arunachal Pradesh	6588149	26799	7176907
Meghalaya	6537909	101950	7355969
Maharashtra***	6000911	130753	6229596
Nagaland	4519526	58460	5041742
Ladakh	3758960	45804	4054293
Karanataka	2821491	36197	2885238
Sikkim	2747214	53150	3186799
Mizoram	2384602	9791	2984732

	Cured	Deaths	Confirmed
State/UnionTerritory			
Andaman and Nicobar Islands	1848286	27136	1938498
Dadra and Nagar Haveli and Daman and Diu	1841750	1014	1938632
Bihar****	1402468	18881	1430909
Lakshadweep	820925	3908	915784
Madhya Pradesh***	780735	10506	791656
Himanchal Pradesh	200040	3507	204516
Dadra and Nagar Haveli	20352	8	20722
Daman & Diu	0	0	2
Unassigned	0	0	161
Cases being reassigned to states	0	0	345565

In [11]:

```
m=an.iloc[:6]
m
```

Out[11]:

	Cured	Deaths	Confirmed
State/UnionTerritory			
Maharashtra	1018765039	23737432	1121491467
Karnataka	441844360	6053762	485970693
Kerala	420174235	1888177	458906023
Tamil Nadu	404095807	5916658	431928644
Andhra Pradesh	370426530	2939367	392432753
Uttar Pradesh	291479351	4143450	312625843

In [12]:

```python
plt.figure(figsize=(20,18))
k=sns.barplot(x=m.index,y='Deaths',data=m)
plt.title('Top 5 States with high death status',fontsize=20)
plt.xlabel('State/UnionTerritory',fontsize=15)
plt.ylabel('Deaths',fontsize=15)

for i in k.containers:
    k.bar_label(i)
```