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

In [4]:
```
df=pd.read_csv('covid_vaccine_statewise.csv')
```

In [5]:
```
df
```

Out[5]:

	Updated On	State	Total Doses Administered	Sessions	Sites	First Dose Administered	Second Dose Administered	Male (Do Administer
0	16/01/2021	India	48276.0	3455.0	2957.0	48276.0	0.0	N
1	17/01/2021	India	58604.0	8532.0	4954.0	58604.0	0.0	N
2	18/01/2021	India	99449.0	13611.0	6583.0	99449.0	0.0	N
3	19/01/2021	India	195525.0	17855.0	7951.0	195525.0	0.0	N
4	20/01/2021	India	251280.0	25472.0	10504.0	251280.0	0.0	N
...	...	...	...	...	...	...	...	
7840	11/08/2021	West Bengal	NaN	NaN	NaN	NaN	NaN	N
7841	12/08/2021	West Bengal	NaN	NaN	NaN	NaN	NaN	N
7842	13/08/2021	West Bengal	NaN	NaN	NaN	NaN	NaN	N
7843	14/08/2021	West Bengal	NaN	NaN	NaN	NaN	NaN	N
7844	15/08/2021	West Bengal	NaN	NaN	NaN	NaN	NaN	N

7845 rows × 24 columns

In [6]:
```
df.columns
```

Out[6]:
```
Index(['Updated On', 'State', 'Total Doses Administered', 'Sessions',
       ' Sites ', 'First Dose Administered', 'Second Dose Administered',
       'Male (Doses Administered)', 'Female (Doses Administered)',
       'Transgender (Doses Administered)', ' Covaxin (Doses Administered)',
       'CoviShield (Doses Administered)', 'Sputnik V (Doses Administered)',
       'AEFI', '18-44 Years (Doses Administered)',
       '45-60 Years (Doses Administered)', '60+ Years (Doses Administered)',
       '18-44 Years(Individuals Vaccinated)',
       '45-60 Years(Individuals Vaccinated)',
       '60+ Years(Individuals Vaccinated)', 'Male(Individuals Vaccinated)',
       'Female(Individuals Vaccinated)', 'Transgender(Individuals Vaccinated)',
       'Total Individuals Vaccinated'],
      dtype='object')
```

In [9]:
```
# Describe the dataset
df.describe()
```

Out[9]:

	Total Doses Administered	Sessions	Sites	First Dose Administered	Second Dose Administered	Male (Doses Administered)	Admi
count	7.621000e+03	7.621000e+03	7621.000000	7.621000e+03	7.621000e+03	7.461000e+03	7.46
mean	9.188171e+06	4.792358e+05	2282.872064	7.414415e+06	1.773755e+06	3.620156e+06	3.16
std	3.746180e+07	1.911511e+06	7275.973730	2.995209e+07	7.570382e+06	1.737938e+07	1.51
min	7.000000e+00	0.000000e+00	0.000000	7.000000e+00	0.000000e+00	0.000000e+00	2.00
25%	1.356570e+05	6.004000e+03	69.000000	1.166320e+05	1.283100e+04	5.655500e+04	5.21
50%	8.182020e+05	4.547000e+04	597.000000	6.614590e+05	1.388180e+05	3.897850e+05	3.34
75%	6.625243e+06	3.428690e+05	1708.000000	5.387805e+06	1.166434e+06	2.735777e+06	2.56
max	5.132284e+08	3.501031e+07	73933.000000	4.001504e+08	1.130780e+08	2.701636e+08	2.39

8 rows × 22 columns

In [11]:
```
#Number of persons vaccinated first time for india
df[df['State']=='India']
```

Out[11]:

	Updated On	State	Total Doses Administered	Sessions	Sites	First Dose Administered	Second Dose Administered	Male (Doses Administered)
0	16/01/2021	India	48276.0	3455.0	2957.0	48276.0	0.0	NaN
1	17/01/2021	India	58604.0	8532.0	4954.0	58604.0	0.0	NaN
2	18/01/2021	India	99449.0	13611.0	6583.0	99449.0	0.0	NaN
3	19/01/2021	India	195525.0	17855.0	7951.0	195525.0	0.0	NaN
4	20/01/2021	India	251280.0	25472.0	10504.0	251280.0	0.0	NaN
...	...	...	...	...	...	...	...	..
207	11/08/2021	India	NaN	NaN	NaN	NaN	NaN	NaN
208	12/08/2021	India	NaN	NaN	NaN	NaN	NaN	NaN
209	13/08/2021	India	NaN	NaN	NaN	NaN	NaN	NaN
210	14/08/2021	India	NaN	NaN	NaN	NaN	NaN	NaN
211	15/08/2021	India	NaN	NaN	NaN	NaN	NaN	NaN

212 rows × 24 columns

In [12]:
```
import numpy as np
```

In [15]:
```
states=np.unique(df['State'])
```

In [16]:
```
mh=df[df['State']=='Maharashtra']
```

In [18]:
```
mh['First Dose Administered'].sum()
```

Out[18]:
```
2784364331.0
```

In [22]:
```
for state in states:
    temp=df[df['State']==state]
    print(state,temp['First Dose Administered'].sum())
```

```
Andaman and Nicobar Islands 16425854.0
Andhra Pradesh 1232860845.0
Arunachal Pradesh 49004980.0
Assam 585600226.0
Bihar 1470502878.0
Chandigarh 44703105.0
Chhattisgarh 796002902.0
Dadra and Nagar Haveli and Daman and Diu 33595063.0
Delhi 624339473.0
Goa 75991368.0
Gujarat 2131646009.0
Haryana 755798352.0
Himachal Pradesh 316294004.0
India 28262144791.0
Jammu and Kashmir 410101777.0
Jharkhand 603673726.0
Karnataka 1873329968.0
Kerala 1193845072.0
Ladakh 17809249.0
Lakshadweep 4363655.0
Madhya Pradesh 1796604591.0
Maharashtra 2784364331.0
Manipur 67409568.0
Meghalaya 62615974.0
Mizoram 47873077.0
Nagaland 42410766.0
Odisha 1032633168.0
Puducherry 41346858.0
Punjab 584346582.0
Rajasthan 2201044187.0
Sikkim 36980929.0
Tamil Nadu 1288532512.0
Telangana 880320645.0
Tripura 192689726.0
Uttar Pradesh 2788411358.0
Uttarakhand 363191446.0
West Bengal 1796449989.0
```

In [24]:
```
first_dose=df[df['Updated On']=='09/08/2021']
```

In [26]:
```
first_dose[['State','First Dose Administered']]
```

Out[26]:

	State	First Dose Administered
205	India	400150406.0
417	Andaman and Nicobar Islands	216046.0
629	Andhra Pradesh	17628583.0
841	Arunachal Pradesh	692475.0
1053	Assam	10495293.0
1265	Bihar	23350171.0

	State	First Dose Administered
1477	Chandigarh	700285.0
1689	Chhattisgarh	9181482.0
1901	Dadra and Nagar Haveli and Daman and Diu	584370.0
2113	Delhi	7835546.0
2326	Goa	1094392.0
2538	Gujarat	28101222.0
2750	Haryana	10086831.0
2962	Himachal Pradesh	4249849.0
3174	Jammu and Kashmir	5318516.0
3386	Jharkhand	8382280.0
3598	Karnataka	25847691.0
3810	Kerala	15670747.0
4022	Ladakh	188699.0
4234	Lakshadweep	51156.0
4446	Madhya Pradesh	29723036.0
4658	Maharashtra	35040812.0
4870	Manipur	1159424.0
5082	Meghalaya	938572.0
5294	Mizoram	654946.0
5506	Nagaland	632120.0
5718	Odisha	13954592.0
5930	Puducherry	601591.0
6142	Punjab	8005636.0
6354	Rajasthan	27008606.0
6566	Sikkim	497851.0
6778	Tamil Nadu	20836674.0
6990	Telangana	11649268.0
7202	Tripura	2411195.0
7414	Uttar Pradesh	45932488.0
7626	Uttarakhand	5070544.0
7838	West Bengal	23257417.0

In [27]:
```
first_dose=df[(df['Updated On']=='09/08/2021') &(df['State'] != 'India')]
```

In [29]:
```
x=first_dose[['State','First Dose Administered']]
```

In [30]:
```
x.to_csv('FirstDoseIndia.csv',index=False)
```

In [32]:
```
Second_dose=df[(df['Updated On']=='09/08/2021') &(df['State'] != 'India')]
x=Second_dose[['State','Second Dose Administered']]
x.to_csv('SecondDoseIndia.csv',index=False)
```

In [33]:
```
# 4. Number of males vaccinated
males=df['Male(Individuals Vaccinated)']
```

In [35]:
```
males.max()
```

Out[35]:
```
134941971.0
```

In [36]:
```
females=df['Female(Individuals Vaccinated)']
```

In [37]:
```
females.max()
```

Out[37]:
```
115668447.0
```

In [ ]:
```

```