```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt

data = pd.read_csv("covid_vaccine_statewise.csv")

print("The top five rows are:")
data.head()
```

```
The top five rows are:
```

```
   Updated On  State  Total Doses Administered  Sessions   Sites   \
0  16/01/2021  India                   48276.0    3455.0   2957.0
1  17/01/2021  India                   58604.0    8532.0   4954.0
2  18/01/2021  India                   99449.0   13611.0   6583.0
3  19/01/2021  India                  195525.0   17855.0   7951.0
4  20/01/2021  India                  251280.0   25472.0  10504.0

   First Dose Administered  Second Dose Administered  \
0                  48276.0                       0.0
1                  58604.0                       0.0
2                  99449.0                       0.0
3                 195525.0                       0.0
4                 251280.0                       0.0

   Male (Doses Administered)  Female (Doses Administered)  \
0                        NaN                          NaN
1                        NaN                          NaN
2                        NaN                          NaN
3                        NaN                          NaN
4                        NaN                          NaN

   Transgender (Doses Administered)  ...  18-44 Years (Doses
Administered)  \
0                               NaN  ...
NaN
1                               NaN  ...
NaN
2                               NaN  ...
NaN
3                               NaN  ...
NaN
4                               NaN  ...
NaN

   45-60 Years (Doses Administered)  60+ Years (Doses Administered)  \
0                               NaN                             NaN
1                               NaN                             NaN
2                               NaN                             NaN
3                               NaN                             NaN
```

```
4                                    NaN                                    NaN

   18-44 Years(Individuals Vaccinated)  45-60 Years(Individuals
Vaccinated)  \
0                                    NaN
NaN
1                                    NaN
NaN
2                                    NaN
NaN
3                                    NaN
NaN
4                                    NaN
NaN

   60+ Years(Individuals Vaccinated)  Male(Individuals Vaccinated)  \
0                                NaN                        23757.0
1                                NaN                        27348.0
2                                NaN                        41361.0
3                                NaN                        81901.0
4                                NaN                        98111.0

   Female(Individuals Vaccinated)  Transgender(Individuals Vaccinated)
\
0                         24517.0                                  2.0

1                         31252.0                                  4.0

2                         58083.0                                  5.0

3                        113613.0                                 11.0

4                        153145.0                                 24.0


   Total Individuals Vaccinated
0                       48276.0
1                       58604.0
2                       99449.0
3                      195525.0
4                      251280.0

[5 rows x 24 columns]
```

```
print("The last five rows are:")
data.tail()
```

```
The last five rows are:

      Updated On        State  Total Doses Administered  Sessions
Sites   \
```

```
7840  11/08/2021  West Bengal                          NaN        NaN
NaN
7841  12/08/2021  West Bengal                          NaN        NaN
NaN
7842  13/08/2021  West Bengal                          NaN        NaN
NaN
7843  14/08/2021  West Bengal                          NaN        NaN
NaN
7844  15/08/2021  West Bengal                          NaN        NaN
NaN

      First Dose Administered  Second Dose Administered  \
7840                      NaN                         NaN
7841                      NaN                         NaN
7842                      NaN                         NaN
7843                      NaN                         NaN
7844                      NaN                         NaN

      Male (Doses Administered)  Female (Doses Administered)  \
7840                        NaN                          NaN
7841                        NaN                          NaN
7842                        NaN                          NaN
7843                        NaN                          NaN
7844                        NaN                          NaN

      Transgender (Doses Administered)  ...  18-44 Years (Doses
Administered)  \
7840                                NaN  ...
NaN
7841                                NaN  ...
NaN
7842                                NaN  ...
NaN
7843                                NaN  ...
NaN
7844                                NaN  ...
NaN

      45-60 Years (Doses Administered)  60+ Years (Doses Administered)
\
7840                               NaN                             NaN

7841                               NaN                             NaN

7842                               NaN                             NaN

7843                               NaN                             NaN

7844                               NaN                             NaN
```

```
      18-44 Years(Individuals Vaccinated)  \
7840                                   NaN
7841                                   NaN
7842                                   NaN
7843                                   NaN
7844                                   NaN

      45-60 Years(Individuals Vaccinated)  60+ Years(Individuals
Vaccinated)  \
7840                                   NaN
NaN
7841                                   NaN
NaN
7842                                   NaN
NaN
7843                                   NaN
NaN
7844                                   NaN
NaN

      Male(Individuals Vaccinated)  Female(Individuals Vaccinated)  \
7840                           NaN                             NaN
7841                           NaN                             NaN
7842                           NaN                             NaN
7843                           NaN                             NaN
7844                           NaN                             NaN

      Transgender(Individuals Vaccinated)  Total Individuals
Vaccinated
7840                                  NaN
NaN
7841                                  NaN
NaN
7842                                  NaN
NaN
7843                                  NaN
NaN
7844                                  NaN
NaN

[5 rows x 24 columns]
```

```
print("The shape is:")
data.shape
```

```
The shape is:

(7845, 24)
```

```
print("The columns present in the dataset are:")
data.columns
```

```
The columns present in the dataset are:

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')
```

```
#   a. Describe the dataset
data.describe()
```

```
       Total Doses Administered      Sessions        Sites   \
count              7.621000e+03  7.621000e+03   7621.000000
mean               9.188171e+06  4.792358e+05   2282.872064
std                3.746180e+07  1.911511e+06   7275.973730
min                7.000000e+00  0.000000e+00      0.000000
25%                1.356570e+05  6.004000e+03     69.000000
50%                8.182020e+05  4.547000e+04    597.000000
75%                6.625243e+06  3.428690e+05   1708.000000
max                5.132284e+08  3.501031e+07  73933.000000

       First Dose Administered  Second Dose Administered  \
count             7.621000e+03              7.621000e+03
mean              7.414415e+06              1.773755e+06
std               2.995209e+07              7.570382e+06
min               7.000000e+00              0.000000e+00
25%               1.166320e+05              1.283100e+04
50%               6.614590e+05              1.388180e+05
75%               5.387805e+06              1.166434e+06
max               4.001504e+08              1.130780e+08

       Male (Doses Administered)  Female (Doses Administered)  \
count               7.461000e+03                 7.461000e+03
```

```
mean                  3.620156e+06                  3.168416e+06
std                   1.737938e+07                  1.515310e+07
min                   0.000000e+00                  2.000000e+00
25%                   5.655500e+04                  5.210700e+04
50%                   3.897850e+05                  3.342380e+05
75%                   2.735777e+06                  2.561513e+06
max                   2.701636e+08                  2.395186e+08

       Transgender (Doses Administered)   Covaxin (Doses Administered)
\
count                       7461.000000                  7.621000e+03

mean                        1162.978019                  1.044669e+06

std                         5931.353995                  4.452259e+06

min                            0.000000                  0.000000e+00

25%                            8.000000                  0.000000e+00

50%                          113.000000                  1.185100e+04

75%                          800.000000                  7.579300e+05

max                        98275.000000                  6.236742e+07


       CoviShield (Doses Administered)  ...  18-44 Years (Doses
Administered)  \
count                      7.621000e+03  ...
1.702000e+03
mean                       8.126553e+06  ...
8.773958e+06
std                        3.298414e+07  ...
2.660829e+07
min                        7.000000e+00  ...
2.662400e+04
25%                        1.331340e+05  ...
4.344842e+05
50%                        7.567360e+05  ...
3.095970e+06
75%                        6.007817e+06  ...
7.366241e+06
max                        4.468251e+08  ...
2.243304e+08

       45-60 Years (Doses Administered)  60+ Years (Doses
Administered)  \
count                       1.702000e+03
1.702000e+03
```

```
mean                          7.442161e+06
5.641605e+06
std                           2.225999e+07
1.681650e+07
min                           1.681500e+04
9.994000e+03
25%                           2.326275e+05
1.285605e+05
50%                           2.695938e+06
1.805696e+06
75%                           6.969726e+06
5.294763e+06
max                           1.667575e+08
1.186927e+08

       18-44 Years(Individuals Vaccinated)  \
count                           3.733000e+03
mean                            1.395895e+06
std                             5.501454e+06
min                             1.059000e+03
25%                             5.655400e+04
50%                             2.947270e+05
75%                             9.105160e+05
max                             9.224315e+07

       45-60 Years(Individuals Vaccinated)  60+ Years(Individuals
Vaccinated)  \
count                           3.734000e+03
3.734000e+03
mean                            2.916515e+06
2.627444e+06
std                             9.567607e+06
8.192225e+06
min                             1.136000e+03
5.580000e+02
25%                             9.248225e+04
5.615975e+04
50%                             8.330395e+05
7.887425e+05
75%                             2.499280e+06
2.337874e+06
max                             9.096888e+07
6.731098e+07

       Male(Individuals Vaccinated)  Female(Individuals Vaccinated)  \
count                  1.600000e+02                    1.600000e+02
mean                   4.461687e+07                    3.951018e+07
std                    3.950749e+07                    3.417684e+07
min                    2.375700e+04                    2.451700e+04
25%                    5.739350e+06                    5.023407e+06
```

```
50%                     3.716590e+07                     3.365402e+07
75%                     7.441663e+07                     6.685368e+07
max                     1.349420e+08                     1.156684e+08

       Transgender(Individuals Vaccinated)  Total Individuals
Vaccinated
count                           160.000000
5.919000e+03
mean                          12370.543750
4.547842e+06
std                           12485.026753
1.834182e+07
min                               2.000000
7.000000e+00
25%                            1278.750000
7.427550e+04
50%                            8007.500000
4.022880e+05
75%                           19851.000000
3.501562e+06
max                           46462.000000
2.506569e+08

[8 rows x 22 columns]
```

```
data.describe(include = 'object')
```

```
        Updated On  State
count         7845   7845
unique         213     37
top     16/01/2021  Delhi
freq            37    213
```

```
data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 7845 entries, 0 to 7844
Data columns (total 24 columns):
 #   Column                                Non-Null Count  Dtype
---  ------                                --------------  -----
 0   Updated On                            7845 non-null   object
 1   State                                 7845 non-null   object
 2   Total Doses Administered              7621 non-null   float64
 3   Sessions                              7621 non-null   float64
 4    Sites                                7621 non-null   float64
 5   First Dose Administered               7621 non-null   float64
 6   Second Dose Administered              7621 non-null   float64
 7   Male (Doses Administered)             7461 non-null   float64
 8   Female (Doses Administered)           7461 non-null   float64
 9   Transgender (Doses Administered)      7461 non-null   float64
```

```
 10   Covaxin (Doses Administered)         7621 non-null   float64
 11  CoviShield (Doses Administered)       7621 non-null   float64
 12  Sputnik V (Doses Administered)        2995 non-null   float64
 13  AEFI                                  5438 non-null   float64
 14  18-44 Years (Doses Administered)      1702 non-null   float64
 15  45-60 Years (Doses Administered)      1702 non-null   float64
 16  60+ Years (Doses Administered)        1702 non-null   float64
 17  18-44 Years(Individuals Vaccinated)   3733 non-null   float64
 18  45-60 Years(Individuals Vaccinated)   3734 non-null   float64
 19  60+ Years(Individuals Vaccinated)     3734 non-null   float64
 20  Male(Individuals Vaccinated)          160 non-null    float64
 21  Female(Individuals Vaccinated)        160 non-null    float64
 22  Transgender(Individuals Vaccinated)   160 non-null    float64
 23  Total Individuals Vaccinated          5919 non-null   float64
dtypes: float64(22), object(2)
memory usage: 1.4+ MB
```

```
data.isnull().sum()
```

```
Updated On                              0
State                                   0
Total Doses Administered              224
Sessions                              224
 Sites                                224
First Dose Administered               224
Second Dose Administered              224
Male (Doses Administered)             384
Female (Doses Administered)           384
Transgender (Doses Administered)      384
 Covaxin (Doses Administered)         224
CoviShield (Doses Administered)       224
Sputnik V (Doses Administered)       4850
AEFI                                 2407
18-44 Years (Doses Administered)     6143
45-60 Years (Doses Administered)     6143
60+ Years (Doses Administered)       6143
18-44 Years(Individuals Vaccinated)  4112
45-60 Years(Individuals Vaccinated)  4111
60+ Years(Individuals Vaccinated)    4111
Male(Individuals Vaccinated)         7685
Female(Individuals Vaccinated)       7685
Transgender(Individuals Vaccinated)  7685
Total Individuals Vaccinated         1926
dtype: int64
```

```
# As there are many NULL values present in the given dataset.
#We need to replace those values by mean(in case of numerical data) or
mode(in case of categorical data).
# Here, we need to work on "First Dose Administered" and "Second Dose
Administered".
```

```
#Both of them are float, hence we will replace the Nan Values by
mean(average).

# Average of First Dose Administered
avg_firstdose = data["First Dose
Administered"].astype("float").mean(axis = 0)
print("Average of First Dose:", avg_firstdose)
```

```
Average of First Dose: 7414415.300354284
```

```
# Replacing First Dose Administered
data["First Dose Administered"].fillna(value = avg_firstdose,
inplace=True)
data
```

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

      First Dose Administered  Second Dose Administered  \
0                4.827600e+04                       0.0
1                5.860400e+04                       0.0
2                9.944900e+04                       0.0
3                1.955250e+05                       0.0
4                2.512800e+05                       0.0
...                       ...                       ...
7840             7.414415e+06                       NaN
7841             7.414415e+06                       NaN
7842             7.414415e+06                       NaN
```

```
7843              7.414415e+06                          NaN
7844              7.414415e+06                          NaN

      Male (Doses Administered)  Female (Doses Administered)  \
0                           NaN                          NaN
1                           NaN                          NaN
2                           NaN                          NaN
3                           NaN                          NaN
4                           NaN                          NaN
...                         ...                          ...
7840                        NaN                          NaN
7841                        NaN                          NaN
7842                        NaN                          NaN
7843                        NaN                          NaN
7844                        NaN                          NaN

      Transgender (Doses Administered)  ...  18-44 Years (Doses
Administered)  \
0                                  NaN  ...
NaN
1                                  NaN  ...
NaN
2                                  NaN  ...
NaN
3                                  NaN  ...
NaN
4                                  NaN  ...
NaN
...                                ...  ...
...
7840                               NaN  ...
NaN
7841                               NaN  ...
NaN
7842                               NaN  ...
NaN
7843                               NaN  ...
NaN
7844                               NaN  ...
NaN

      45-60 Years (Doses Administered)  60+ Years (Doses Administered)
\
0                                  NaN                             NaN

1                                  NaN                             NaN

2                                  NaN                             NaN

3                                  NaN                             NaN
```

```
4                                    NaN                                    NaN

...                                  ...                                    ...

7840                                 NaN                                    NaN

7841                                 NaN                                    NaN

7842                                 NaN                                    NaN

7843                                 NaN                                    NaN

7844                                 NaN                                    NaN


      18-44 Years(Individuals Vaccinated)  \
0                                      NaN
1                                      NaN
2                                      NaN
3                                      NaN
4                                      NaN
...                                    ...
7840                                   NaN
7841                                   NaN
7842                                   NaN
7843                                   NaN
7844                                   NaN

      45-60 Years(Individuals Vaccinated)  60+ Years(Individuals
Vaccinated)  \
0                                      NaN
NaN
1                                      NaN
NaN
2                                      NaN
NaN
3                                      NaN
NaN
4                                      NaN
NaN
...                                    ...
...
7840                                   NaN
NaN
7841                                   NaN
NaN
7842                                   NaN
NaN
7843                                   NaN
```

```
NaN
7844                                    NaN
NaN

      Male(Individuals Vaccinated)  Female(Individuals Vaccinated)  \
0                          23757.0                         24517.0
1                          27348.0                         31252.0
2                          41361.0                         58083.0
3                          81901.0                        113613.0
4                          98111.0                        153145.0
...                            ...                             ...
7840                           NaN                             NaN
7841                           NaN                             NaN
7842                           NaN                             NaN
7843                           NaN                             NaN
7844                           NaN                             NaN

      Transgender(Individuals Vaccinated)  Total Individuals
Vaccinated
0                                     2.0
48276.0
1                                     4.0
58604.0
2                                     5.0
99449.0
3                                    11.0
195525.0
4                                    24.0
251280.0
...                                   ...                 ..
.
7840                                  NaN
NaN
7841                                  NaN
NaN
7842                                  NaN
NaN
7843                                  NaN
NaN
7844                                  NaN
NaN

[7845 rows x 24 columns]
```

```
# Average of Second Dose Administered
avg_seconddose = data["Second Dose
Administered"].astype("float").mean(axis = 0)
print("Average of Second Dose:", avg_seconddose)
```

```
Average of Second Dose: 1773755.2436688098
```

```
# Replacing Second Dose Administered
data["Second Dose Administered"].fillna(value = avg_seconddose,
inplace = True)
data
```

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

      First Dose Administered  Second Dose Administered  \
0                4.827600e+04              0.000000e+00
1                5.860400e+04              0.000000e+00
2                9.944900e+04              0.000000e+00
3                1.955250e+05              0.000000e+00
4                2.512800e+05              0.000000e+00
...                       ...                       ...
7840             7.414415e+06              1.773755e+06
7841             7.414415e+06              1.773755e+06
7842             7.414415e+06              1.773755e+06
7843             7.414415e+06              1.773755e+06
7844             7.414415e+06              1.773755e+06

      Male (Doses Administered)  Female (Doses Administered)  \
0                           NaN                          NaN
1                           NaN                          NaN
2                           NaN                          NaN
3                           NaN                          NaN
4                           NaN                          NaN
...                         ...                          ...
```

```
7840                            NaN                            NaN
7841                            NaN                            NaN
7842                            NaN                            NaN
7843                            NaN                            NaN
7844                            NaN                            NaN

      Transgender (Doses Administered)  ...  18-44 Years (Doses
Administered)  \
0                                    NaN  ...
NaN
1                                    NaN  ...
NaN
2                                    NaN  ...
NaN
3                                    NaN  ...
NaN
4                                    NaN  ...
NaN
...                                  ...  ...
...
7840                                 NaN  ...
NaN
7841                                 NaN  ...
NaN
7842                                 NaN  ...
NaN
7843                                 NaN  ...
NaN
7844                                 NaN  ...
NaN

      45-60 Years (Doses Administered)  60+ Years (Doses Administered)
\
0                                    NaN                              NaN

1                                    NaN                              NaN

2                                    NaN                              NaN

3                                    NaN                              NaN

4                                    NaN                              NaN

...                                  ...                              ...

7840                                 NaN                              NaN

7841                                 NaN                              NaN

7842                                 NaN                              NaN
```

```
7843                                    NaN                                    NaN

7844                                    NaN                                    NaN


      18-44 Years(Individuals Vaccinated)  \
0                                       NaN
1                                       NaN
2                                       NaN
3                                       NaN
4                                       NaN
...                                     ...
7840                                    NaN
7841                                    NaN
7842                                    NaN
7843                                    NaN
7844                                    NaN

      45-60 Years(Individuals Vaccinated)  60+ Years(Individuals
Vaccinated)  \
0                                       NaN
NaN
1                                       NaN
NaN
2                                       NaN
NaN
3                                       NaN
NaN
4                                       NaN
NaN
...                                     ...
...
7840                                    NaN
NaN
7841                                    NaN
NaN
7842                                    NaN
NaN
7843                                    NaN
NaN
7844                                    NaN
NaN

      Male(Individuals Vaccinated)  Female(Individuals Vaccinated)  \
0                          23757.0                          24517.0
1                          27348.0                          31252.0
2                          41361.0                          58083.0
3                          81901.0                         113613.0
4                          98111.0                         153145.0
```

```
...                                 ...                                 ...
7840                                NaN                                 NaN
7841                                NaN                                 NaN
7842                                NaN                                 NaN
7843                                NaN                                 NaN
7844                                NaN                                 NaN

      Transgender(Individuals Vaccinated)  Total Individuals
Vaccinated
0                                     2.0
48276.0
1                                     4.0
58604.0
2                                     5.0
99449.0
3                                    11.0
195525.0
4                                    24.0
251280.0
...                                   ...                               ..
.
7840                                  NaN
NaN
7841                                  NaN
NaN
7842                                  NaN
NaN
7843                                  NaN
NaN
7844                                  NaN
NaN

[7845 rows x 24 columns]
```

```
# b. Number of persons state wise vaccinated for first dose in India
first_dose = data.groupby('State')[['First Dose Administered']].sum()
first_dose
```

```
                                          First Dose Administered
State
Andaman and Nicobar Islands                          6.091235e+07
Andhra Pradesh                                       1.277347e+09
Arunachal Pradesh                                    9.349147e+07
Assam                                                6.300867e+08
Bihar                                                1.514989e+09
Chandigarh                                           8.918960e+07
Chhattisgarh                                         8.404894e+08
Dadra and Nagar Haveli and Daman and Diu             8.549597e+07
Delhi                                                6.762404e+08
Goa                                                  1.204779e+08
```

Gujarat	2.176133e+09
Haryana	8.002848e+08
Himachal Pradesh	3.607805e+08
India	2.830663e+10
Jammu and Kashmir	4.545883e+08
Jharkhand	6.481602e+08
Karnataka	1.917816e+09
Kerala	1.238332e+09
Ladakh	6.229574e+07
Lakshadweep	4.885015e+07
Madhya Pradesh	1.841091e+09
Maharashtra	2.828851e+09
Manipur	1.118961e+08
Meghalaya	1.071025e+08
Mizoram	9.235957e+07
Nagaland	8.689726e+07
Odisha	1.077120e+09
Puducherry	8.583335e+07
Punjab	6.288331e+08
Rajasthan	2.245531e+09
Sikkim	8.146742e+07
Tamil Nadu	1.333019e+09
Telangana	9.248071e+08
Tripura	2.371762e+08
Uttar Pradesh	2.832898e+09
Uttarakhand	4.076779e+08
West Bengal	1.840936e+09

```
#c. Number of persons state wise vaccinated for second dose in India
second_dose = data.groupby('State')[['Second Dose
Administered']].sum()
second_dose
```

State	Second Dose Administered
Andaman and Nicobar Islands	1.476109e+07
Andhra Pradesh	3.694601e+08
Arunachal Pradesh	2.257485e+07
Assam	1.414313e+08
Bihar	2.814331e+08
Chandigarh	2.223627e+07
Chhattisgarh	1.827629e+08
Dadra and Nagar Haveli and Daman and Diu	1.701070e+07
Delhi	2.006352e+08
Goa	2.684071e+07
Gujarat	6.110609e+08
Haryana	1.692986e+08
Himachal Pradesh	8.448111e+07
India	6.770264e+09
Jammu and Kashmir	9.659418e+07

```
Jharkhand                                                 1.327636e+08
Karnataka                                                 4.378297e+08
Kerala                                                    3.746913e+08
Ladakh                                                    1.609629e+07
Lakshadweep                                               1.169898e+07
Madhya Pradesh                                            3.275755e+08
Maharashtra                                               7.235236e+08
Manipur                                                   2.250068e+07
Meghalaya                                                 2.280916e+07
Mizoram                                                   2.064095e+07
Nagaland                                                  1.984717e+07
Odisha                                                    2.619453e+08
Puducherry                                                1.925139e+07
Punjab                                                    1.317635e+08
Rajasthan                                                 5.023455e+08
Sikkim                                                    2.036617e+07
Tamil Nadu                                                3.013132e+08
Telangana                                                 2.087955e+08
Tripura                                                   7.591267e+07
Uttar Pradesh                                             5.650776e+08
Uttarakhand                                               1.107276e+08
West Bengal                                               5.967894e+08
```

```
#d. Number of Males vaccinated
male = data["Male(Individuals Vaccinated)"].sum()
print("The total number of male individuals vaccinated are",
int(male))
```

```
The total number of male individuals vaccinated are 7138698858
```

```
#e. Number of Females vaccinated
female = data["Female(Individuals Vaccinated)"].sum()
print("The total number of female individuals vaccinated are",
int(female))
```

```
The total number of female individuals vaccinated are 6321628736
```