```
In [1]:
        import numpy as np
        import matplotlib.pyplot as plt
        import pandas as pd
        import seaborn as sns
In [2]: d = pd.read_excel('2015_16_Statewise_Elementary.xlsx').drop(columns=['STATCD'])
```

Out[2]:

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
0	JAMMU & KASHMIR	22	201	7263	1628	12549	20.05	
1	HIMACHAL PRADESH	12	124	10120	2243	6857	8.69	
2	PUNJAB	22	146	13197	1780	27704	29.82	
3	CHANDIGARH	1	20	84	20	1055	97.25	
4	UTTARAKHAND	13	95	11989	995	10117	21.54	
5	HARYANA	21	126	7438	1523	25353	24.12	
6	DELHI	9	69	1201	69	16753	77.03	
7	RAJASTHAN	33	302	41441	10594	68621	19.26	
8	UTTAR PRADESH	75	971	98470	9423	199581	17.31	
9	BIHAR	38	537	40779	5633	103805	8.36	
10	SIKKIM	4	29	756	111	608	9.85	
11	ARUNACHAL PRADESH	20	99	2982	234	1383	16.48	
12	NAGALAND	11	47	1478	125	1981	17.31	
13	MANIPUR	9	35	2422	225	2722	21.16	
14	MIZORAM	8	36	851	169	1091	40.42	
15	TRIPURA	8	71	1101	368	3671	14.87	
16	MEGHALAYA	11	41	6166	609	2964	15.32	
17	ASSAM	27	145	21833	3416	31169	11.03	
18	WEST BENGAL	21	470	41179	3799	991348	24.55	
19	JHARKHAND	24	260	27862	2264	32966	18.18	
20	ODISHA	30	423	39334	4880	41947	13.15	
21	CHHATTISGARH	27	146	21834	2664	25540	16.39	
22	MADHYA PRADESH	51	319	54762	3182	72598	21.99	
23	GUJARAT	33	253	19877	4307	60384	31.35	
24	DAMAN & DIU	2	2	39	7	243	23.61	
25	DADRA & NAGAR HAVELI	1	1	70	11	343	14.72	
26	MAHARASHTRA	36	408	43661	5583	112373	36.58	
27	ANDHRA PRADESH	13	670	15075	5076	84666	24.58	
28	KARNATAKA	34	203	29449	4063	61131	29.38	
29	GOA	2	12	530	111	1458	46.00	
30	LAKSHADWEEP	1	3	10	9	64	41.86	
31	KERALA	14	166	1907	1375	33388	24.76	

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
32	TAMIL NADU	30	413	19301	4092	72139	38.10	
33	PUDUCHERRY	4	6	145	33	1244	52.12	
34	A & N ISLANDS	3	9	198	37	380	30.58	
35	TELANGANA	10	459	9934	1776	352	38.67	

36 rows × 50 columns

```
d.columns
           Index(['STATNAME', 'DISTRICTS', 'BLOCKS', 'VILLAGES', 'CLUSTERS', 'TOTPOPULAT',
Out[3]:
                     'P_URB_POP', 'POPULATION_0_6', 'GROWTHRATE', 'SEXRATIO', 'P_SC_POP',
                    'P_ST_POP', 'OVERALL_LI', 'FEMALE_LIT', 'MALE_LIT', 'AREA_SQKM', 'TOT_6_10_15', 'TOT_11_13_15', 'SCHTOTT', 'SCHTOTM', 'SCHTOTGR',
                     'SCHTOTGA', 'SCHTOTPR', 'SCHBOYTOT', 'ENRTOTG', 'ENRTOTP',
                    'ENRTOTM', 'ENRTOTGR', 'ENRTOTPR', 'TCHTOTG', 'TCHTOTP', 'TCHTOTM',
                    'SCLSTOT', 'STCHTOT', 'ROADTOT', 'SPLAYTOT', 'SBNDRTOT', 'SGTOILTOT', 'SBTOILTOT', 'ENR50TOT', 'KITSTOT', 'ENR50TOT', 'CLSTOT', 'TCHTOT', 'TCHMTOT', 'ENRGTOT'],
                   dtype='object')
In [4]: d[0:6]
```

Out[4]:		STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPUL!
	0	JAMMU & KASHMIR	22	201	7263	1628	12549	20.05	
	1	HIMACHAL PRADESH	12	124	10120	2243	6857	8.69	
	2	PUNJAB	22	146	13197	1780	27704	29.82	
	3	CHANDIGARH	1	20	84	20	1055	97.25	
	4	UTTARAKHAND	13	95	11989	995	10117	21.54	
	5	HARYANA	21	126	7438	1523	25353	24.12	

6 rows × 50 columns

```
d.columns
In [5]:
              Index(['STATNAME', 'DISTRICTS', 'BLOCKS', 'VILLAGES', 'CLUSTERS', 'TOTPOPULAT',
                           'P_URB_POP', 'POPULATION_0_6', 'GROWTHRATE', 'SEXRATIO', 'P_SC_POP',
                           'P_ST_POP', 'OVERALL_LI', 'FEMALE_LIT', 'MALE_LIT', 'AREA_SQKM', 'TOT_6_10_15', 'TOT_11_13_15', 'SCHTOTT', 'SCHTOTM', 'SCHTOTGR',
                          'SCHTOTGA', 'SCHTOTPR', 'SCHBOYTOT', 'ENRTOT', 'ENRTOTG', 'ENRTOTP', 'ENRTOTM', 'ENRTOTGR', 'ENRTOTPR', 'TCHTOTG', 'TCHTOTP', 'TCHTOTM', 'SCLSTOT', 'STCHTOT', 'ROADTOT', 'SPLAYTOT', 'SBNDRTOT', 'SGTOILTOT', 'SBTOILTOT', 'ESTDTOT', 'MDMTOT', 'KITTOT', 'KITSTOT', 'ENR50TOT',
                           'CLSTOT', 'TCHTOT', 'TCHFTOT', 'TCHMTOT', 'ENRGTOT'],
                        dtype='object')
              d.describe()
In [6]:
```

Out[6]:

	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPULATI
count	36.000000	36.000000	36.000000	36.000000	36.000000	36.000000	36
mean	18.888889	203.250000	16520.500000	2289.833333	58626.333333	27.678889	13
std	15.947732	220.756928	21166.739773	2645.161756	165584.055709	18.354991	5
min	1.000000	1.000000	10.000000	7.000000	64.000000	8.360000	ç
25%	8.000000	35.750000	1038.500000	121.500000	1348.250000	16.457500	10
50%	13.500000	135.500000	8686.000000	1575.500000	14651.000000	22.800000	12
75%	27.750000	306.250000	23341.000000	3865.000000	60570.750000	32.657500	14
max	75.000000	971.000000	98470.000000	10594.000000	991348.000000	97.250000	39

8 rows × 49 columns

There are total 36 states whose population details and admission details are present.

Out[9]:

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
0	JAMMU & KASHMIR	22	201	7263	1628	12549	20.05	
1	HIMACHAL PRADESH	12	124	10120	2243	6857	8.69	
2	PUNJAB	22	146	13197	1780	27704	29.82	
3	CHANDIGARH	1	20	84	20	1055	97.25	
4	UTTARAKHAND	13	95	11989	995	10117	21.54	
5	HARYANA	21	126	7438	1523	25353	24.12	
6	DELHI	9	69	1201	69	16753	77.03	
7	RAJASTHAN	33	302	41441	10594	68621	19.26	
8	UTTAR PRADESH	75	971	98470	9423	199581	17.31	
9	BIHAR	38	537	40779	5633	103805	8.36	
10	SIKKIM	4	29	756	111	608	9.85	
11	ARUNACHAL PRADESH	20	99	2982	234	1383	16.48	
12	NAGALAND	11	47	1478	125	1981	17.31	
13	MANIPUR	9	35	2422	225	2722	21.16	
14	MIZORAM	8	36	851	169	1091	40.42	
15	TRIPURA	8	71	1101	368	3671	14.87	
16	MEGHALAYA	11	41	6166	609	2964	15.32	
17	ASSAM	27	145	21833	3416	31169	11.03	
18	WEST BENGAL	21	470	41179	3799	991348	24.55	
19	JHARKHAND	24	260	27862	2264	32966	18.18	
20	ODISHA	30	423	39334	4880	41947	13.15	
21	CHHATTISGARH	27	146	21834	2664	25540	16.39	
22	MADHYA PRADESH	51	319	54762	3182	72598	21.99	
23	GUJARAT	33	253	19877	4307	60384	31.35	
24	DAMAN & DIU	2	2	39	7	243	23.61	
25	DADRA & NAGAR HAVELI	1	1	70	11	343	14.72	
26	MAHARASHTRA	36	408	43661	5583	112373	36.58	
27	ANDHRA PRADESH	13	670	15075	5076	84666	24.58	
28	KARNATAKA	34	203	29449	4063	61131	29.38	
29	GOA	2	12	530	111	1458	46.00	
30	LAKSHADWEEP	1	3	10	9	64	41.86	
31	KERALA	14	166	1907	1375	33388	24.76	

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
32	TAMIL NADU	30	413	19301	4092	72139	38.10	
33	PUDUCHERRY	4	6	145	33	1244	52.12	
34	A & N ISLANDS	3	9	198	37	380	30.58	
35	TELANGANA	10	459	9934	1776	352	38.67	

36 rows × 50 columns



Out[10]: 0 2 5

STATNAME	JAMMU & KASHMIR	HIMACHAL PRADESH	PUNJAB	CHANDIGARH	UTTARAKHAND	HARYANA	DEL
DISTRICTS	22	12	22	1	13	21	
BLOCKS	201	124	146	20	95	126	(
VILLAGES	7263	10120	13197	84	11989	7438	120
CLUSTERS	1628	2243	1780	20	995	1523	1
TOTPOPULAT	12549	6857	27704	1055	10117	25353	167
P_URB_POP	20.05	8.69	29.82	97.25	21.54	24.12	77.
POPULATION_0_6	16.01	11.14	10.62	11.18	13.14	13.01	11.
GROWTHRATE	23.71	12.81	13.73	17.1	19.17	19.9	20.9
SEXRATIO	883	974	893	818	963	877	8
P_SC_POP	7.4	25.2	31.9	18.9	18.8	20.2	16
P_ST_POP	11.9	5.7	0.0	0.0	2.9	0.0	C
OVERALL_LI	68.74	83.78	76.68	86.43	79.63	76.64	86.
FEMALE_LIT	58.01	76.6	71.34	81.38	70.7	66.77	80.9
MALE_LIT	78.26	90.83	81.48	90.54	88.33	85.38	91.
AREA_SQKM	222236	55673	50362	114	53483	44212	14
TOT_6_10_15	1452682	588162	2447062	114473	1123220	2556187	17044
TOT_11_13_15	865656	354221	1498066	67721	687598	1509213	8742
SCHTOT	28578	18024	28776	201	23660	22268	57
SCHTOTM	2	1	1125	6	368	836	
SCHTOTGR	21829	15014	18005	16	16860	13171	1.
SCHTOTGA	23329	15386	20956	122	18044	14825	30
SCHTOTPR	3776	2258	3831	1	4253	4038	ł
SCHBOYTOT	28128	17952	28327	198	23317	20888	48
ENRTOT	1856776	950766	3962439	157921	1712673	3730944	30070
ENRTOTG	1024643	580395	2072324	101884	757209	1663751	16756
ENRTOTP	832077	370337	1651510	55040	907076	1970731	13313
ENRTOTM	56	34	238605	997	48388	96462	
ENRTOTGR	951439	547430	1560105	17869	679723	1352437	352
ENRTOTPR	515189	277699	755203	386	604115	989249	302
тснтотс	98689	66338	128034	5437	65399	93090	762
ТСНТОТР	59148	28524	106425	3801	42144	105482	626
тснтотм	10	3	16011	71	1831	6398	
SCLSTOT	2114	540	562	1	259	207	
STCHTOT	1745	1476	1583	0	1558	1074	

	0	1	2	3	4	5	
ROADTOT	22634	14929	28650	201	18214	21824	57
SPLAYTOT	10604	15456	27853	187	13768	18780	507
SBNDRTOT	9710	12016	28317	201	19105	21740	57
SGTOILTOT	26934	17949	28482	200	22866	21390	47.
SBTOILTOT	25887	17898	28216	198	22726	20788	48.
ESTDTOT	13213	3638	5801	37	5912	3910	13 ⁻
МДМТОТ	23201	15331	19901	116	17737	14642	30
КІТТОТ	15074	14268	18042	7	15644	10092	
кітѕтот	21674	15117	18565	7	17700	12701	
ENR50TOT	17560	12830	8598	1	15035	4409	+
CLSTOT	138909	72957	177988	4054	94488	157391	792
тснтот	157847	94865	250470	9309	109374	204970	1388
TCHFTOT	70853	44864	185000	7345	51649	114808	1004
тснмтот	86994	50001	65470	1964	57725	90162	384
ENRGTOT	886199	452717	1787164	73130	811764	1694202	14041

50 rows × 36 columns

In [11]: d.dtypes

., O.+O 1 W		
Out[11]:	STATNAME	object
ouc[II].	DISTRICTS	int64
	BLOCKS	int64
	VILLAGES	int64
	CLUSTERS	int64
	TOTPOPULAT	int64
	P URB POP	float64
	POPULATION_0_6	float64
	GROWTHRATE	float64
	SEXRATIO	int64
	P_SC_POP	float64
	P ST POP	float64
	OVERALL_LI	float64
	FEMALE_LIT	float64
	MALE LIT	float64
	AREA_SQKM	int64
	TOT_6_10_15	int64
	TOT_11_13_15	int64
	SCHTOT	int64
	SCHTOTM	int64
	SCHTOTIA	int64
	SCHTOTGA	int64
	SCHTOTPR	int64
	SCHBOYTOT	int64
	ENRTOT	int64
	ENRTOTG	int64
	ENRTOTO	int64
	ENRTOTP	int64
	ENRTOTM	int64
	ENRTOTER	int64
	TCHTOTG	int64
	TCHTOTP	int64
	TCHTOTM	int64
	SCLSTOT	int64
	STCHTOT	int64
	ROADTOT	int64
	SPLAYTOT	int64
	SBNDRTOT	int64
	SGTOILTOT	int64
	SBTOILTOT	int64
	ESTDTOT	int64
	MDMTOT	int64
	KITTOT	int64
	KITSTOT	int64
	ENR50TOT	int64
	CLSTOT	int64
	TCHTOT	int64
	TCHFTOT	int64
	TCHMTOT	int64
	ENRGTOT	int64
	dtype: object	

In [12]: d.head(15)

Out[12]:

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPUI
0	JAMMU & KASHMIR	22	201	7263	1628	12549	20.05	
1	HIMACHAL PRADESH	12	124	10120	2243	6857	8.69	
2	PUNJAB	22	146	13197	1780	27704	29.82	
3	CHANDIGARH	1	20	84	20	1055	97.25	
4	UTTARAKHAND	13	95	11989	995	10117	21.54	
5	HARYANA	21	126	7438	1523	25353	24.12	
6	DELHI	9	69	1201	69	16753	77.03	
7	RAJASTHAN	33	302	41441	10594	68621	19.26	
8	UTTAR PRADESH	75	971	98470	9423	199581	17.31	
9	BIHAR	38	537	40779	5633	103805	8.36	
10	SIKKIM	4	29	756	111	608	9.85	
11	ARUNACHAL PRADESH	20	99	2982	234	1383	16.48	
12	NAGALAND	11	47	1478	125	1981	17.31	
13	MANIPUR	9	35	2422	225	2722	21.16	
14	MIZORAM	8	36	851	169	1091	40.42	

15 rows × 50 columns

									r
]:	d.t	:ail(10)							
		STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
	26	MAHARASHTRA	36	408	43661	5583	112373	36.58	
	27	ANDHRA PRADESH	13	670	15075	5076	84666	24.58	
	28	KARNATAKA	34	203	29449	4063	61131	29.38	
	29	GOA	2	12	530	111	1458	46.00	
	30	LAKSHADWEEP	1	3	10	9	64	41.86	
	31	KERALA	14	166	1907	1375	33388	24.76	
	32	TAMIL NADU	30	413	19301	4092	72139	38.10	
	33	PUDUCHERRY	4	6	145	33	1244	52.12	
	34	A & N ISLANDS	3	9	198	37	380	30.58	
	35	TELANGANA	10	459	9934	1776	352	38.67	

10 rows × 50 columns

In [14]: d[['STATNAME', 'DISTRICTS']]

Out[14]:

	STATNAME	DISTRICTS
0	JAMMU & KASHMIR	22
1	HIMACHAL PRADESH	12
2	PUNJAB	22
3	CHANDIGARH	1
4	UTTARAKHAND	13
5	HARYANA	21
6	DELHI	9
7	RAJASTHAN	33
8	UTTAR PRADESH	75
9	BIHAR	38
10	SIKKIM	4
11	ARUNACHAL PRADESH	20
12	NAGALAND	11
13	MANIPUR	9
14	MIZORAM	8
15	TRIPURA	8
16	MEGHALAYA	11
17	ASSAM	27
18	WEST BENGAL	21
19	JHARKHAND	24
20	ODISHA	30
21	CHHATTISGARH	27
22	MADHYA PRADESH	51
23	GUJARAT	33
24	DAMAN & DIU	2
25	DADRA & NAGAR HAVELI	1
26	MAHARASHTRA	36
27	ANDHRA PRADESH	13
28	KARNATAKA	34
29	GOA	2
30	LAKSHADWEEP	1
31	KERALA	14
32	TAMIL NADU	30
33	PUDUCHERRY	4
34	A & N ISLANDS	3
35	TELANGANA	10

In [15]: list(d.groupby('STATNAME'))

```
Out[15]: [('A & N ISLANDS',
                  STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
          34 A & N ISLANDS
                                 3
                                        9
                                               198
             P URB POP POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
                                                   878 ...
          34
                 30.58
                                10.4
                                         6.68
             KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
                       138
                                188 2755 5346
                                                    3343
                                                            2003
          [1 rows x 50 columns]),
         ('ANDHRA PRADESH',
                  STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
          27 ANDHRA PRADESH 13 670 15075 5076
             P_URB_POP POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
                                                  992 ...
          27
                24.58
                              10.21
                                     11.1
                                                            15095 45561
             KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
                     35387
                             29423 270159 276900 130555 146345 2711102
          [1 rows x 50 columns]),
         ('ARUNACHAL PRADESH',
                     STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
          11 ARUNACHAL PRADESH 20 99
                                                  2982 234
             P_URB_POP POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
                                     25.92
                                                  920 ...
          11
               16.48
                              14.66
                                                               2058
             KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
               2061 3150 2169 21138 21584 9240 12344 159128
          [1 \text{ rows x } 50 \text{ columns}]),
         ('ASSAM',
            STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
                         27 145 21833 3416
                                                           31169
          17
             ASSAM
             POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                                        954 ...
          17
                     14.47
                              16.93
                                                  8501 53184
                                                                 35980
             KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
               51698 30392 214043 302001 109199 192802 2727655
          17
          [1 \text{ rows x 50 columns}]),
         ('BIHAR',
           STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
              BIHAR
                                537
                                       40779
                                                 5633
                                                          103805
                         38
            POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                                        916 ...
                     17.9
                              25.07
                                                  26359
                                                         69140
            KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT
                                                          ENRGTOT
                    2993 458552 467877 164170 252687 11667789
          [1 rows x 50 columns]),
         ('CHANDIGARH',
              STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
          3 CHANDIGARH
                                   20
                                         84
                                                              1055
                                                     20
            POPULATION Ø 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                    11.18
                              17.1
                                        818 ...
                                                     37
                                                            116
            KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
                          1
                               4054
                                      9309
                                             7345
                                                     1964
                                                            73130
```

```
[1 \text{ rows } x 50 \text{ columns}]),
('CHHATTISGARH',
        STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
                        27
                               146
                                      21834
                                                 2664
21 CHHATTISGARH
                                                            25540
    P URB POP POPULATION Ø 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
21
        16.39
                       14.03
                                  22.59
                                              991 ...
                                                          18397
    KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
     35208
             41546
                       20886 192058 214727
                                               92759
                                                      121968 2185121
[1 rows x 50 columns]),
('DADRA & NAGAR HAVELI',
               STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
25 DADRA & NAGAR HAVELI
                                                 70
                                 1
                                        1
                                                           11
                                                                     343
    P URB POP POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
        14.72
                       14.35
                                    55.5
                                              775 ...
                                                            120
25
    KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
25
               283
                        109
                               1819
                                       2411
                                                1524
                                                                27572
        52
                                                         887
[1 rows x 50 columns]),
('DAMAN & DIU',
       STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT PURB POP \
24 DAMAN & DIU
                        2
                                2
                                         39
                                                   7
                                                             243
                                                                     23.61
    POPULATION Ø 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
24
             10.65
                        53.54
                                    618 ...
                                                  28
                                                          96
    KITSTOT ENRSØTOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
         96
                         846
                               1163
                                         795
                                                  363
                                                         12995
24
                  24
[1 rows x 50 columns]),
('DELHI',
  STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
                          69
                                  1201
                                             69
                                                      16753
   POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
            11.76
                       20.96
                                   866
                                               1379
                                                       3017
6
                                       . . .
   KITSTOT ENRSØTOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
                 85
                     79259 138849
                                    100423
                                               38426 1404158
         0
[1 rows x 50 columns]),
('GOA',
   STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
29
                           12
                                    530
                                                        1458
                    2
                                             111
                                                                  46.0
    POPULATION Ø 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
              9.57
                         8.17
                                    968
                                                 163
                                                        1295
29
                                        . . .
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
         7
                 763
                        7241
                               11382
                                        9097
                                                 2285
[1 rows x 50 columns]),
('GUJARAT',
   STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
23 GUJARAT
                   33
                          253
                                  19877
                                            4307
                                                       60384
                                                                  31.35
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                                    918 ...
23
             12.41
                        19.17
                                                9220
                                                       33148
                                                               27027
```

```
KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
               9047 325412 325031 182204 142827 4217062
23
     28122
[1 rows x 50 columns]),
('HARYANA',
  STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT PURB POP \
                 21 126 7438 1523
5 HARYANA
                                                  25353
   POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                            877 ...
                                          3910
5
           13.01
                      19.9
                                                 14642
   KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
            4409 157391 204970 114808 90162 1694202
[1 rows x 50 columns]),
('HIMACHAL PRADESH',
          STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
  HIMACHAL PRADESH
                        12
                               124
                                      10120
                                                2243
   P_URB_POP POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
                                         974 ...
                     11.14
                               12.81
1
       8.69
                                                      3638
   KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
  14268 15117 12830 72957 94865 44864 50001 452717
[1 rows x 50 columns]),
('JAMMU & KASHMIR',
         STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
   JAMMU & KASHMIR
                       22
                              201
                                      7263
                                               1628
   P URB POP POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
                     16.01
                               23.71
                                         883 ... 13213
   KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
   15074
          21674
                   17560 138909 157847 70853
                                                 86994
[1 \text{ rows x } 50 \text{ columns}]),
('JHARKHAND',
     STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
19 JHARKHAND
                  24
                       260
                                 27862
                                           2264
                                                     32966
    POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                      22.34
                                 947 ...
                                                 40815
19
                                            22843
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
             14659 251790 181866
                                           119882 3217775
19
     40248
                                   61983
[1 rows x 50 columns]),
('KARNATAKA',
     STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
28 KARNATAKA
                   34
                          203
                                 29449
                                           4063
                                                     61131
                                                               29.38
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
28
            11.21
                      15.67
                                 968 ... 13721 48067
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
             25595 363342 312662 188549 123874 4034327
     39788
28
[1 rows x 50 columns]),
('KERALA',
   STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
                  14
31
   KERALA
                        166
                                1907
                                         1375
                                                   33388
                                                             24.76
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
```

```
9.95
                       44.86
                                  1084 ...
31
                                              2174
                                                     11320
                                                            10528
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
      11281
               4163 168243 243885
                                     190347
                                             53515 1959627
31
[1 \text{ rows x } 50 \text{ columns}]),
('LAKSHADWEEP',
       STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT PURB POP
   LAKSHADWEEP
                       1
                              3
                                       10
                                                                   41.86
    POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
             11.0
                        6.23
                                  946 ...
                                                        39
30
                                                 10
    KITSTOT ENRSØTOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
30
         37
                        392
                               888
                                        412
                                                476
[1 rows x 50 columns]),
('MADHYA PRADESH',
         STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
22 MADHYA PRADESH
                         51
                                319
                                       54762
                                                  3182
    P URB POP POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
22
       21.99
                      14.53
                                  20.3
                                             930 ...
                                                        40550 112875
    KITTOT KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
22
    65235
             84749
                     59699 614752 528609 231100 297509 6099329
[1 \text{ rows x } 50 \text{ columns}]),
('MAHARASHTRA',
       STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
26 MAHARASHTRA
                      36 408 43661
                                               5583
                                                        112373
                                                                   36.58
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                       15.99
                                  925 ...
                                              19786
                                                    83058
26
            11.43
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
      74542 39413 516213 666338 288381 377957 7519261
26
[1 rows x 50 columns]),
('MANIPUR',
   STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
                   9
                          35
                                  2422
13 MANIPUR
                                            225
                                                      2722
                                                                21.16
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
            12.98
13
                       18.65
                                  987
                                               1237
                                                      3535
                                                              1516
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
       3202
               2678 26974 38936 19201 19735
13
[1 rows x 50 columns]),
('MEGHALAYA',
     STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
                            41
16 MEGHALAYA
                                    6166
                                              609
                                                        2964
                                                                 15.32
                    11
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
            18.75
                       27.82
                                  986 ...
16
                                               4962
                                                     11059
                                                              9627
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
      10802
               8366 41475 44148 24231 19917
                                                     393293
16
[1 rows x 50 columns]),
('MIZORAM',
   STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
14 MIZORAM
                    8
                          36
                                   851
                                            169
                                                      1091
                                                               40.42
```

```
POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
14
            15.17
                        22.78
                                    975
                                                 978
                                                        2343
                                                               2277
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
                      14435
                              18482
                                        8609
                                                 9873
14
                1658
[1 \text{ rows x } 50 \text{ columns}]),
('NAGALAND',
    STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
12 NAGALAND
                    11
                          47
                                   1478
                                              125
                                                         1981
                                                                  17.31
    POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
12
             14.44
                        -0.47
                                   931 ...
                                                 618
                                                        1888
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
12
       1812
                 942
                      19355
                              30320
                                       15358
                                              14962
                                                      171460
[1 rows x 50 columns]),
('ODISHA',
   STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
                                 39334
20
    ODISHA
                   30
                          423
                                            4880
                                                       41947
                                                                 13.15
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
              12.0
                        13.97
                                   978 ...
                                               14512
                                                     62536
20
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
               29565 254482 314988
                                              179031 3058382
                                     135957
20
      59322
[1 rows x 50 columns]),
('PUDUCHERRY',
      STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
33 PUDUCHERRY
                       4
                              6
                                      145
                                                 33
                                                           1244
                                                                    52.12
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                                  1038 ...
             10.25
                        27.72
                                                 137
                                                         438
33
                                                                 33
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
33
         34
                 154
                        6478
                              12128
                                        8716
                                                 3412
                                                        82340
[1 rows x 50 columns]),
('PUNJAB',
  STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
                                           1780
   PLINTAR
                  22
                         146
                                 13197
                                                      27704
                                                                29.82
   POPULATION 0 6 GROWTHRATE SEXRATIO
                                       ... ESTDTOT MDMTOT KITTOT \
2
            10.62
                       13.73
                                               5801
                                                      19901
                                                             18042
                                  893
   KITSTOT ENRSØTOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
2
     18565
               8598 177988 250470
                                    185000
                                               65470 1787164
[1 rows x 50 columns]),
('RAJASTHAN',
    STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
  RAJASTHAN
                    33
                           302
                                  41441
                                            10594
                                                        68621
                                                                  19.26
   POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
            15.31
                       21.44
                                  926
                                              40692
                                                      68943
   KITSTOT ENRSØTOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
              35673 593656 656083
                                    228864 427219 5687861
[1 \text{ rows } x 50 \text{ columns}]),
('SIKKIM',
```

```
STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
                                                      608
                                                               9.85
10
   SIKKIM
                   4
                         29
                                  756
                                           111
    POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
            10.05
10
                       12.36
                                  889 ...
                                              332
                                                      855
                                                             811
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
10
       842
                721
                     9153 15077
                                      8237 6840
[1 rows x 50 columns]),
('TAMIL NADU',
     STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
                                  19301
32 TAMIL NADU 30
                           413
                                            4092
                                                       72139
                                                                  38.1
    POPULATION Ø 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
             9.56
                                  995 ...
                        15.6
                                             8880
                                                   45254
32
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
     43895 18004 368636 557801 412353 145430 4503530
32
[1 rows x 50 columns]),
('TELANGANA',
     STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
35 TELANGANA
                          459
                                  9934
                                                        352
                   10
                                            1776
                                                                38 67
    POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
             39.2
                       13.58
                                  987 ...
                                             12694
                                                    28292
35
    KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
     25133 15731 218998 229268 114157 115111 2428321
35
[1 rows x 50 columns]),
('TRIPURA',
   STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
15 TRIPURA
                   8
                         71
                                 1101
                                           368
                                                     3671
                                                              14.87
    POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                       14.75
                                  961 ...
                                             1547
15
    KITSTOT ENRSOTOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
               1963
                     25046 46613 13589
                                            33024 279322
15
[1 rows x 50 columns]),
('UTTAR PRADESH',
       STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT \
8 UTTAR PRADESH
                      75
                            971
                                    98470
                                             9423
                                                        199581
   P_URB_POP POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT \
      17.31
                      14.9
                                20.09
                                           908 ...
                                                     103836 164371
   KITTOT KITSTOT ENR50TOT CLSTOT
                                    TCHTOT TCHFTOT TCHMTOT
                                                             ENRGTOT
                     39438 1229467 1018912
          156437
                                            406828
                                                     608614 17895397
[1 rows x 50 columns]),
('UTTARAKHAND',
     STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
                            95
                                  11989
   UTTARAKHAND
                    13
                                              995
                                                       10117
                                                               21.54
   POPULATION Ø 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
4
           13.14
                      19.17
                                 963
                                             5912
                                                   17737
   KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
     17700
              15035
                     94488 109374
                                    51649
                                             57725
                                                   811764
```

```
[1 rows x 50 columns]),
         ('WEST BENGAL',
                STATNAME DISTRICTS
                                  BLOCKS VILLAGES CLUSTERS TOTPOPULAT P URB POP \
          18 WEST BENGAL
                               21
                                     470
                                            41179
                                                      3799
                                                                         24.55
                                                               991348
             POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                     11.07
                                13.93
                                          947 ...
                                                            81548
          18
             KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
                        31271 449598 565646
          18
               78100
                                             241201
                                                    324190 6449590
          [1 rows x 50 columns])]
        dx = d.groupby('STATNAME')
        dx
        <pandas.core.groupby.generic.DataFrameGroupBy object at 0x00000275BF1CB490>
Out[16]:
        for i in dx:
In [17]:
                                ')
            print(i[0],end='
        A & N TSLANDS
                        ANDHRA PRADESH
                                            ARUNACHAL PRADESH
                                                                 ASSAM
                                                                            RTHAR
                                                               DAMAN & DIU
        CHANDIGARH
                       CHHATTISGARH
                                      DADRA & NAGAR HAVELI
                 GOA
                       GUJARAT
                                     HARYANA
                                                  HIMACHAL PRADESH
                                                                       JAMMU & KA
        FIHT
        SHMIR
                  JHARKHAND KARNATAKA
                                                       LAKSHADWEEP
                                                                          MADHYA
                                              KERALA
                  MAHARASHTRA MANIPUR MEGHALAYA MIZORAM
        PRADESH
                                                                           NAGALA
               ODISHA PUDUCHERRY PUNJAB RAJASTHAN SIKKIM
        AMIL NADU
                      TELANGANA TRIPURA
                                            UTTAR PRADESH
                                                                  UTTARAKHAND
        WEST BENGAL
```

Fetch data of MAHARASHTRA only

```
for i,j in dx:
In [18]:
             if i=='MAHARASHTRA':
                 print(j)
               STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
         26 MAHARASHTRA
                                36
                                       408
                                              43661
                                                         5583
                                                                   112373
                                                                               36.58
             POPULATION 0 6 GROWTHRATE SEXRATIO
                                                ... ESTDTOT MDMTOT KITTOT \
         26
                                 15.99
                                             925
                                                        19786
                                                                83058
             KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
         26
              74542
                        39413 516213 666338
                                                288381
                                                        377957
                                                                7519261
         [1 rows x 50 columns]
```

Fetch data of MAHARASHTRA and PUNJAB only¶

```
for i, j in dx:
In [19]:
              if i=='MAHARASHTRA' or i=='PUNJAB':
                  print(j)
```

```
STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
       26 MAHARASHTRA
                                 408
                                       43661
                                                5583
                                                         112373
                                                                  36.58
                          36
           POPULATION_0_6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
       26
                  11.43
                            15.99 925 ... 19786 83058 65770
           KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
       26 74542 39413 516213 666338 288381 377957 7519261
       [1 rows x 50 columns]
         STATNAME DISTRICTS BLOCKS VILLAGES CLUSTERS TOTPOPULAT P_URB_POP \
       2 PUNJAB
                 22 146 13197 1780
                                                      27704
                                                              29.82
          POPULATION 0 6 GROWTHRATE SEXRATIO ... ESTDTOT MDMTOT KITTOT \
                 10.62
                          13.73
                                   893 ... 5801 19901
                                                           18042
          KITSTOT ENR50TOT CLSTOT TCHTOT TCHFTOT TCHMTOT ENRGTOT
       2 18565 8598 177988 250470 185000 65470 1787164
       [1 rows x 50 columns]
       d_sort = d.sort_values(by='STATNAME')
In [20]:
        d sort
```

Out[20]:

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
34	A & N ISLANDS	3	9	198	37	380	30.58	
27	ANDHRA PRADESH	13	670	15075	5076	84666	24.58	
11	ARUNACHAL PRADESH	20	99	2982	234	1383	16.48	
17	ASSAM	27	145	21833	3416	31169	11.03	
9	BIHAR	38	537	40779	5633	103805	8.36	
3	CHANDIGARH	1	20	84	20	1055	97.25	
21	CHHATTISGARH	27	146	21834	2664	25540	16.39	
25	DADRA & NAGAR HAVELI	1	1	70	11	343	14.72	
24	DAMAN & DIU	2	2	39	7	243	23.61	
6	DELHI	9	69	1201	69	16753	77.03	
29	GOA	2	12	530	111	1458	46.00	
23	GUJARAT	33	253	19877	4307	60384	31.35	
5	HARYANA	21	126	7438	1523	25353	24.12	
1	HIMACHAL PRADESH	12	124	10120	2243	6857	8.69	
0	JAMMU & KASHMIR	22	201	7263	1628	12549	20.05	
19	JHARKHAND	24	260	27862	2264	32966	18.18	
28	KARNATAKA	34	203	29449	4063	61131	29.38	
31	KERALA	14	166	1907	1375	33388	24.76	
30	LAKSHADWEEP	1	3	10	9	64	41.86	
22	MADHYA PRADESH	51	319	54762	3182	72598	21.99	
26	MAHARASHTRA	36	408	43661	5583	112373	36.58	
13	MANIPUR	9	35	2422	225	2722	21.16	
16	MEGHALAYA	11	41	6166	609	2964	15.32	
14	MIZORAM	8	36	851	169	1091	40.42	
12	NAGALAND	11	47	1478	125	1981	17.31	
20	ODISHA	30	423	39334	4880	41947	13.15	
33	PUDUCHERRY	4	6	145	33	1244	52.12	
2	PUNJAB	22	146	13197	1780	27704	29.82	
7	RAJASTHAN	33	302	41441	10594	68621	19.26	
10	SIKKIM	4	29	756	111	608	9.85	
32	TAMIL NADU	30	413	19301	4092	72139	38.10	
35	TELANGANA	10	459	9934	1776	352	38.67	

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
15	TRIPURA	8	71	1101	368	3671	14.87	
8	UTTAR PRADESH	75	971	98470	9423	199581	17.31	
4	UTTARAKHAND	13	95	11989	995	10117	21.54	
18	WEST BENGAL	21	470	41179	3799	991348	24.55	

36 rows × 50 columns

```
In [21]: d_sort1 = d.sort_values(by='DISTRICTS')
    d_sort1
```

Out[21]:

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
25	DADRA & NAGAR HAVELI	1	1	70	11	343	14.72	
3	CHANDIGARH	1	20	84	20	1055	97.25	
30	LAKSHADWEEP	1	3	10	9	64	41.86	
24	DAMAN & DIU	2	2	39	7	243	23.61	
29	GOA	2	12	530	111	1458	46.00	
34	A & N ISLANDS	3	9	198	37	380	30.58	
10	SIKKIM	4	29	756	111	608	9.85	
33	PUDUCHERRY	4	6	145	33	1244	52.12	
14	MIZORAM	8	36	851	169	1091	40.42	
15	TRIPURA	8	71	1101	368	3671	14.87	
13	MANIPUR	9	35	2422	225	2722	21.16	
6	DELHI	9	69	1201	69	16753	77.03	
35	TELANGANA	10	459	9934	1776	352	38.67	
12	NAGALAND	11	47	1478	125	1981	17.31	
16	MEGHALAYA	11	41	6166	609	2964	15.32	
1	HIMACHAL PRADESH	12	124	10120	2243	6857	8.69	
4	UTTARAKHAND	13	95	11989	995	10117	21.54	
27	ANDHRA PRADESH	13	670	15075	5076	84666	24.58	
31	KERALA	14	166	1907	1375	33388	24.76	
11	ARUNACHAL PRADESH	20	99	2982	234	1383	16.48	
5	HARYANA	21	126	7438	1523	25353	24.12	
18	WEST BENGAL	21	470	41179	3799	991348	24.55	
0	JAMMU & KASHMIR	22	201	7263	1628	12549	20.05	
2	PUNJAB	22	146	13197	1780	27704	29.82	
19	JHARKHAND	24	260	27862	2264	32966	18.18	
21	CHHATTISGARH	27	146	21834	2664	25540	16.39	
17	ASSAM	27	145	21833	3416	31169	11.03	
20	ODISHA	30	423	39334	4880	41947	13.15	
32	TAMIL NADU	30	413	19301	4092	72139	38.10	
23	GUJARAT	33	253	19877	4307	60384	31.35	
7	RAJASTHAN	33	302	41441	10594	68621	19.26	
28	KARNATAKA	34	203	29449	4063	61131	29.38	
26	MAHARASHTRA	36	408	43661	5583	112373	36.58	

	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
9	BIHAR	38	537	40779	5633	103805	8.36	
22	MADHYA PRADESH	51	319	54762	3182	72598	21.99	
8	UTTAR PRADESH	75	971	98470	9423	199581	17.31	

36 rows × 50 columns

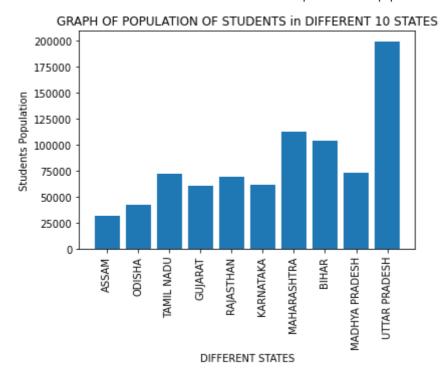


	STATNAME	DISTRICTS	BLOCKS	VILLAGES	CLUSTERS	TOTPOPULAT	P_URB_POP	POPU
26	MAHARASHTRA	36	408	43661	5583	112373	36.58	
22	MADHYA PRADESH	51	319	54762	3182	72598	21.99	
8	UTTAR PRADESH	75	971	98470	9423	199581	17.31	

36 rows × 50 columns

PLOT GRAPH OF POPULATION OF STUDENTS in DIFFERENT STATES

```
In [24]: ds =dq['STATNAME']
         list(ds)
Out[24]: ['ASSAM',
           'ODISHA',
           'TAMIL NADU',
           'GUJARAT',
           'RAJASTHAN',
           'KARNATAKA',
           'MAHARASHTRA',
           'BIHAR',
           'MADHYA PRADESH',
           'UTTAR PRADESH']
In [25]: dp = np.array(dq['TOTPOPULAT'])
Out[25]: array([ 31169, 41947, 72139, 60384, 68621, 61131, 112373, 103805,
                 72598, 199581], dtype=int64)
In [26]:
         plt.bar(ds,dp)
          plt.xticks(rotation=90)
          plt.title('GRAPH OF POPULATION OF STUDENTS in DIFFERENT 10 STATES')
          plt.ylabel('Students Population')
          plt.xlabel('DIFFERENT STATES')
          plt.show()
```



```
np.random.random()
In [27]:
          0.9101446099716759
Out[27]:
```

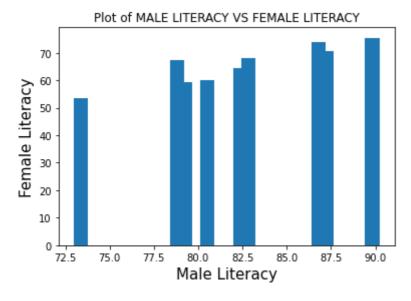
FIND LITERACY RATE & GROWTH RATE AND STATE LOWEST AND HIGHEST LITERACY RATE

```
d.columns
In [28]:
           Index(['STATNAME', 'DISTRICTS', 'BLOCKS', 'VILLAGES', 'CLUSTERS', 'TOTPOPULAT',
Out[28]:
                    'P_URB_POP', 'POPULATION_0_6', 'GROWTHRATE', 'SEXRATIO', 'P_SC_POP',
                    'P_ST_POP', 'OVERALL_LI', 'FEMALE_LIT', 'MALE_LIT', 'AREA_SQKM', 'TOT_6_10_15', 'TOT_11_13_15', 'SCHTOTT', 'SCHTOTM', 'SCHTOTGR',
                    'SCHTOTGA', 'SCHTOTPR', 'SCHBOYTOT', 'ENRTOT', 'ENRTOTG', 'ENRTOTP',
                    'ENRTOTM', 'ENRTOTGR', 'ENRTOTPR', 'TCHTOTG', 'TCHTOTP', 'TCHTOTM',
                    'SCLSTOT', 'STCHTOT', 'ROADTOT', 'SPLAYTOT', 'SBNDRTOT', 'SGTOILTOT', 'SBTOILTOT', 'ESTDTOT', 'MDMTOT', 'KITTOT', 'KITSTOT', 'ENRS0TOT',
                    'CLSTOT', 'TCHTOT', 'TCHFTOT', 'TCHMTOT', 'ENRGTOT'],
                  dtype='object')
           d[['OVERALL_LI','GROWTHRATE']].nlargest(1,'OVERALL_LI')
In [29]:
Out[29]:
                OVERALL_LI GROWTHRATE
           31
                      93.91
                                      44.86
           d[['OVERALL_LI', 'GROWTHRATE']].nsmallest(1, 'OVERALL_LI')
In [30]:
Out[30]:
              OVERALL_LI GROWTHRATE
           9
                     63.82
                                     25.07
```

plot graph of MALE LITERACY rate wrt Female literacy rate

```
dl = np.array(dq['MALE_LIT'])
In [31]:
         array([78.81, 82.4, 86.81, 87.23, 80.51, 82.85, 89.82, 73.39, 80.53,
Out[31]:
                79.24])
         df = np.array(dq['FEMALE_LIT'])
In [32]:
         array([67.27, 64.36, 73.86, 70.73, 52.66, 68.13, 75.48, 53.33, 60.02,
Out[32]:
                59.261)
In [33]:
         plt.bar(dl,df)
         plt.xlabel('Male Literacy',fontsize=15)
         plt.ylabel('Female Literacy',fontsize=15)
         plt.title('Plot of MALE LITERACY VS FEMALE LITERACY')
```

Text(0.5, 1.0, 'Plot of MALE LITERACY VS FEMALE LITERACY') Out[33]:

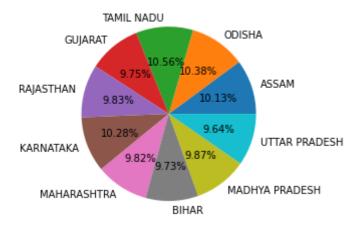


print(dir(plt)) In [34]:

['Annotation', 'Arrow', 'Artist', 'AutoLocator', 'Axes', 'Button', 'Circle', 'Figu re', 'FigureCanvasBase', 'FixedFormatter', 'FixedLocator', 'FormatStrFormatter', 'Formatter', 'FuncFormatter', 'GridSpec', 'IndexLocator', 'Line2D', 'LinearLocator', 'Locator', 'LogFormatterExponent', 'LogFormatterMathtext', 'FuncFormatter', 'GridSpec', 'IndexLocator', 'Line2D', 'LinearLocator', 'LogFormatterMathtext', 'LogFormattext', 'L gLocator', 'MaxNLocator', 'MouseButton', 'MultipleLocator', 'Normalize', 'NullForm atter', 'NullLocator', 'Number', 'PolarAxes', 'Polygon', 'Rectangle', 'ScalarForma tter', 'Slider', 'Subplot', 'SubplotSpec', 'Text', 'TickHelper', 'Widget', '_INSTA LL_FIG_OBSERVER', '_IP_REGISTERED', '_IoffContext', '_IonContext', '__builtins__', '__cached__', '__doc__', '__file__', '__loader__', '__name__', '__package__', '__s pec__', '_api', '_auto_draw_if_interactive', '_backend_mod', '_copy_docstring_and_ deprecators', '_get_required_interactive_framework', '_interactive_bk', '_log', '_ pylab_helpers', '_setup_pyplot_info_docstrings', '_warn_if_gui_out_of_main_threa d', '_xkcd', 'acorr', 'angle_spectrum', 'annotate', 'arrow', 'autoscale', 'autum n', 'axes', 'axhline', 'axhspan', 'axis', 'axline', 'axvline', 'axvspan', 'bar', 'bar_label', 'barbs', 'barh', 'bone', 'box', 'boxplot', 'broken_barh', 'cbook', 'c la', 'clabel', 'clf', 'clim', 'close', 'cm', 'cohere', 'colorbar', 'colormaps', 'c onnect', 'contour', 'contourf', 'cool', 'copper', 'csd', 'cycler', 'delaxes', 'dis connect', 'docstring', 'draw_all', 'draw_if_interactive', 'errorbar', 'eve ntplot', 'figaspect', 'figimage', 'figlegend', 'fignum_exists', 'figtext', 'figur e', 'fill', 'fill_between', 'fill_betweenx', 'findobj', 'flag', 'functools', 'gc a', 'gcf', 'gci', 'get', 'get_backend', 'get_cmap', 'get_current_fig_manager', 'ge t_figlabels', 'get_fignums', 'get_plot_commands', 'get_scale_names', 'getp', 'ginp ut', 'gray', 'grid', 'hexbin', 'hist', 'hist2d', 'hlines', 'hot', 'hsv', 'importli b', 'imread', 'imsave', 'imshow', 'inferno', 'inspect', 'install_repl_displayhoo
k', 'interactive', 'ioff', 'ion', 'isinteractive', 'jet', 'legend', 'locator_param s', 'logging', 'loglog', 'magma', 'magnitude_spectrum', 'margins', 'matplotlib', 'matshow', 'minorticks_off', 'minorticks_on', 'mlab', 'new_figure_manager', 'nipy_ spectral', 'np', 'pause', 'pcolor', 'pcolormesh', 'phase_spectrum', 'pie', 'pink',
'plasma', 'plot', 'plot_date', 'plotting', 'polar', 'prism', 'psd', 'quiver', 'qui verkey', 'rc', 'rcParams', 'rcParamsDefault', 'rcParamsOrig', 'rc_context', 'rcdef aults', 'rcsetup', 're', 'register_cmap', 'rgrids', 'savefig', 'sca', 'scatter', 'sci', 'semilogx', 'semilogy', 'set_cmap', 'set_loglevel', 'setp', 'show', 'specgr am', 'spring', 'spy', 'stackplot', 'stairs', 'stem', 'step', 'streamplot', 'styl e', 'subplot', 'subplot2grid', 'subplot_mosaic', 'subplot_tool', 'subplots', 'subp lots_adjust', 'summer', 'suptitle', 'switch_backend', 'sys', 'table', 'text', 'the tagrids', 'threading', 'tick_params', 'ticklabel_format', 'tight_layout', 'time', 'title', 'tricontour', 'tripcolor', 'triplot', 'twinx', 'twiny', 'u ninstall_repl_displayhook', 'violinplot', 'viridis', 'vlines', 'waitforbuttonpres s', 'winter', 'xcorr', 'xkcd', 'xlabel', 'xlim', 'xscale', 'xticks', 'ylabel', 'yl im', 'yscale', 'yticks']

PIECHART FOR SEXRATIO FOR 10 STATES

```
In [35]: di = np.array(dq['SEXRATIO'])
Out[35]: array([954, 978, 995, 918, 926, 968, 925, 916, 930, 908], dtype=int64)
         plt.pie(di,labels=list(ds),autopct='%.2f%%')
         plt.show()
```



Find the percentage of increase in growth rate from lowest state to highest state growth rate

```
dg = np.array(d.GROWTHRATE)
In [40]:
         array([23.71, 12.81, 13.73, 17.1, 19.17, 19.9, 20.96, 21.44, 20.09,
Out[40]:
                25.07, 12.36, 25.92, -0.47, 18.65, 22.78, 14.75, 27.82, 16.93,
                13.93, 22.34, 13.97, 22.59, 20.3, 19.17, 53.54, 55.5, 15.99,
                11.1, 15.67, 8.17, 6.23, 44.86, 15.6, 27.72, 6.68, 13.58])
         dg.sort()
In [42]:
In [43]:
         array([-0.47, 6.23, 6.68, 8.17, 11.1, 12.36, 12.81, 13.58, 13.73,
Out[43]:
                13.93, 13.97, 14.75, 15.6 , 15.67, 15.99, 16.93, 17.1 , 18.65,
                19.17, 19.17, 19.9, 20.09, 20.3, 20.96, 21.44, 22.34, 22.59,
                22.78, 23.71, 25.07, 25.92, 27.72, 27.82, 44.86, 53.54, 55.5 ])
         x = d[['STATNAME', 'GROWTHRATE']]
```

Out[48]:

	STATNAME	GROWTHRATE
0	JAMMU & KASHMIR	23.71
1	HIMACHAL PRADESH	12.81
2	PUNJAB	13.73
3	CHANDIGARH	17.10
4	UTTARAKHAND	19.17
5	HARYANA	19.90
6	DELHI	20.96
7	RAJASTHAN	21.44
8	UTTAR PRADESH	20.09
9	BIHAR	25.07
10	SIKKIM	12.36
11	ARUNACHAL PRADESH	25.92
12	NAGALAND	-0.47
13	MANIPUR	18.65
14	MIZORAM	22.78
15	TRIPURA	14.75
16	MEGHALAYA	27.82
17	ASSAM	16.93
18	WEST BENGAL	13.93
19	JHARKHAND	22.34
20	ODISHA	13.97
21	CHHATTISGARH	22.59
22	MADHYA PRADESH	20.30
23	GUJARAT	19.17
24	DAMAN & DIU	53.54
25	DADRA & NAGAR HAVELI	55.50
26	MAHARASHTRA	15.99
27	ANDHRA PRADESH	11.10
28	KARNATAKA	15.67
29	GOA	8.17
30	LAKSHADWEEP	6.23
31	KERALA	44.86
32	TAMIL NADU	15.60
33	PUDUCHERRY	27.72
34	A & N ISLANDS	6.68
35	TELANGANA	13.58

```
low = x[12::40]
In [51]:
         low
             STATNAME GROWTHRATE
Out[51]:
         12 NAGALAND
                               -0.47
In [62]: d[['STATNAME', 'GROWTHRATE']].nlargest(1, 'GROWTHRATE')
Out[62]:
                       STATNAME GROWTHRATE
         25 DADRA & NAGAR HAVELI
                                          55.5
In [63]: d[['STATNAME', 'GROWTHRATE']].nsmallest(1, 'GROWTHRATE')
Out[63]:
             STATNAME GROWTHRATE
         12 NAGALAND
                               -0.47
In [67]: #increase in percentage of growth rate
         diff_per = ((55.5-(-.47))/100)*100
         diff_per
         55.97
Out[67]:
```

List of states having students less than 10000

```
In [69]: ls = d[['STATNAME','TOTPOPULAT']]
```

Out[69]:

	STATNAME	TOTPOPULAT
0	JAMMU & KASHMIR	12549
1	HIMACHAL PRADESH	6857
2	PUNJAB	27704
3	CHANDIGARH	1055
4	UTTARAKHAND	10117
5	HARYANA	25353
6	DELHI	16753
7	RAJASTHAN	68621
8	UTTAR PRADESH	199581
9	BIHAR	103805
10	SIKKIM	608
11	ARUNACHAL PRADESH	1383
12	NAGALAND	1981
13	MANIPUR	2722
14	MIZORAM	1091
15	TRIPURA	3671
16	MEGHALAYA	2964
17	ASSAM	31169
18	WEST BENGAL	991348
19	JHARKHAND	32966
20	ODISHA	41947
21	CHHATTISGARH	25540
22	MADHYA PRADESH	72598
23	GUJARAT	60384
24	DAMAN & DIU	243
25	DADRA & NAGAR HAVELI	343
26	MAHARASHTRA	112373
27	ANDHRA PRADESH	84666
28	KARNATAKA	61131
29	GOA	1458
30	LAKSHADWEEP	64
31	KERALA	33388
32	TAMIL NADU	72139
33	PUDUCHERRY	1244
34	A & N ISLANDS	380
35	TELANGANA	352

```
In [73]: x1 = np.array(d['STATNAME'])
         array(['JAMMU & KASHMIR', 'HIMACHAL PRADESH', 'PUNJAB', 'CHANDIGARH',
Out[73]:
                 'UTTARAKHAND', 'HARYANA', 'DELHI', 'RAJASTHAN', 'UTTAR PRADESH',
                 'BIHAR', 'SIKKIM', 'ARUNACHAL PRADESH', 'NAGALAND', 'MANIPUR',
                'MIZORAM', 'TRIPURA', 'MEGHALAYA', 'ASSAM', 'WEST BENGAL',
                'JHARKHAND', 'ODISHA', 'CHHATTISGARH', 'MADHYA PRADESH', 'GUJARAT',
                'DAMAN & DIU', 'DADRA & NAGAR HAVELI', 'MAHARASHTRA',
                'ANDHRA PRADESH', 'KARNATAKA', 'GOA', 'LAKSHADWEEP', 'KERALA',
                'TAMIL NADU', 'PUDUCHERRY', 'A & N ISLANDS', 'TELANGANA'],
               dtype=object)
In [74]: x2 = np.array(d['TOTPOPULAT'])
         array([ 12549, 6857, 27704,
                                          1055, 10117, 25353, 16753, 68621,
Out[74]:
                199581, 103805, 608,
                                         1383, 1981, 2722, 1091, 3671,
                  2964, 31169, 991348, 32966, 41947, 25540, 72598, 60384,
                          343, 112373, 84666, 61131, 1458,
                                                                    64, 33388,
                   243,
                 72139,
                          1244,
                                   380,
                                           352], dtype=int64)
In [82]: y = list(zip(x1,x2))
         У
Out[82]: [('JAMMU & KASHMIR', 12549),
          ('HIMACHAL PRADESH', 6857),
          ('PUNJAB', 27704),
          ('CHANDIGARH', 1055),
          ('UTTARAKHAND', 10117),
           ('HARYANA', 25353),
           ('DELHI', 16753),
           ('RAJASTHAN', 68621),
           ('UTTAR PRADESH', 199581),
           ('BIHAR', 103805),
           ('SIKKIM', 608),
           ('ARUNACHAL PRADESH', 1383),
           ('NAGALAND', 1981),
           ('MANIPUR', 2722),
           ('MIZORAM', 1091),
          ('TRIPURA', 3671),
           ('MEGHALAYA', 2964),
           ('ASSAM', 31169),
           ('WEST BENGAL', 991348),
           ('JHARKHAND', 32966),
           ('ODISHA', 41947),
           ('CHHATTISGARH', 25540),
           ('MADHYA PRADESH', 72598),
           ('GUJARAT', 60384),
           ('DAMAN & DIU', 243),
           ('DADRA & NAGAR HAVELI', 343),
           ('MAHARASHTRA', 112373),
          ('ANDHRA PRADESH', 84666),
           ('KARNATAKA', 61131),
           ('GOA', 1458),
           ('LAKSHADWEEP', 64),
           ('KERALA', 33388),
           ('TAMIL NADU', 72139),
           ('PUDUCHERRY', 1244),
           ('A & N ISLANDS', 380),
          ('TELANGANA', 352)]
In [84]: y.sort(key=lambda x: x[1])
```

```
[('LAKSHADWEEP', 64),
Out[84]:
           ('DAMAN & DIU', 243),
           ('DADRA & NAGAR HAVELI', 343),
           ('TELANGANA', 352),
           ('A & N ISLANDS', 380),
           ('SIKKIM', 608),
           ('CHANDIGARH', 1055),
           ('MIZORAM', 1091),
           ('PUDUCHERRY', 1244),
            'ARUNACHAL PRADESH', 1383),
           ('GOA', 1458),
           ('NAGALAND', 1981),
           ('MANIPUR', 2722),
           ('MEGHALAYA', 2964),
           ('TRIPURA', 3671),
           ('HIMACHAL PRADESH', 6857),
           ('UTTARAKHAND', 10117),
           ('JAMMU & KASHMIR', 12549),
           ('DELHI', 16753),
           ('HARYANA', 25353),
           ('CHHATTISGARH', 25540),
           ('PUNJAB', 27704),
           ('ASSAM', 31169),
           ('JHARKHAND', 32966),
           ('KERALA', 33388),
           ('ODISHA', 41947),
           ('GUJARAT', 60384),
           ('KARNATAKA', 61131),
           ('RAJASTHAN', 68621),
           ('TAMIL NADU', 72139),
           ('MADHYA PRADESH', 72598),
           ('ANDHRA PRADESH', 84666),
           ('BIHAR', 103805),
           ('MAHARASHTRA', 112373),
           ('UTTAR PRADESH', 199581),
           ('WEST BENGAL', 991348)]
          for i,j in y:
In [88]:
              if j>10000:
                   print(i, end='\t\t')
          UTTARAKHAND
                                    JAMMU & KASHMIR
                                                              DELHI
                                                                               HARYANA
                                                                                                CH
          HATTISGARH
                                                     ASSAM
                                                                      JHARKHAND
                                                                                                ΚE
          RALA
                           ODISHA
                                            GUJARAT
                                                              KARNATAKA
                                                                                        RAJASTHAN
          TAMIL NADU
                                    MADHYA PRADESH
                                                              ANDHRA PRADESH
                                                                                        BIHAR
          MAHARASHTRA
                                    UTTAR PRADESH
                                                              WEST BENGAL
          d.columns
In [90]:
          Index(['STATNAME', 'DISTRICTS', 'BLOCKS', 'VILLAGES', 'CLUSTERS', 'TOTPOPULAT',
Out[90]:
                  'P_URB_POP', 'POPULATION_0_6', 'GROWTHRATE', 'SEXRATIO', 'P_SC_POP',
                  'P_ST_POP', 'OVERALL_LI', 'FEMALE_LIT', 'MALE_LIT', 'AREA_SQKM',
                  'TOT_6_10_15', 'TOT_11_13_15', 'SCHTOT', 'SCHTOTM', 'SCHTOTGR',
                  'SCHTOTGA', 'SCHTOTPR', 'SCHBOYTOT', 'ENRTOT', 'ENRTOTG', 'ENRTOTP',
                  'ENRTOTM', 'ENRTOTGR', 'ENRTOTPR', 'TCHTOTG', 'TCHTOTP', 'TCHTOTM', 'SCLSTOT', 'STCHTOT', 'ROADTOT', 'SPLAYTOT', 'SBNDRTOT', 'SGTOILTOT',
                  'SBTOILTOT', 'ESTDTOT', 'MDMTOT', 'KITTOT', 'KITSTOT', 'ENR50TOT',
                  'CLSTOT', 'TCHTOT', 'TCHFTOT', 'TCHMTOT', 'ENRGTOT'],
                dtype='object')
```

Give statewise male students and female students

In [93]: d[['STATNAME','TOTPOPULAT','SEXRATIO']]

Out[93]:

	STATNAME	TOTPOPULAT	SEXRATIO
0	JAMMU & KASHMIR	12549	883
1	HIMACHAL PRADESH	6857	974
2	PUNJAB	27704	893
3	CHANDIGARH	1055	818
4	UTTARAKHAND	10117	963
5	HARYANA	25353	877
6	DELHI	16753	866
7	RAJASTHAN	68621	926
8	UTTAR PRADESH	199581	908
9	BIHAR	103805	916
10	SIKKIM	608	889
11	ARUNACHAL PRADESH	1383	920
12	NAGALAND	1981	931
13	MANIPUR	2722	987
14	MIZORAM	1091	975
15	TRIPURA	3671	961
16	MEGHALAYA	2964	986
17	ASSAM	31169	954
18	WEST BENGAL	991348	947
19	JHARKHAND	32966	947
20	ODISHA	41947	978
21	CHHATTISGARH	25540	991
22	MADHYA PRADESH	72598	930
23	GUJARAT	60384	918
24	DAMAN & DIU	243	618
25	DADRA & NAGAR HAVELI	343	775
26	MAHARASHTRA	112373	925
27	ANDHRA PRADESH	84666	992
28	KARNATAKA	61131	968
29	GOA	1458	968
30	LAKSHADWEEP	64	946
31	KERALA	33388	1084
32	TAMIL NADU	72139	995
33	PUDUCHERRY	1244	1038
34	A & N ISLANDS	380	878
35	TELANGANA	352	987

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