In []:
In [6]: import pandas as pd
 data = pd.read\_csv("/Users/subhamgiri/Downloads/file.csv")
In [7]: data.head()
Out[7]:

| District_code | State_name              | District_name | Population | Male   | Female | Literate | Workers | Male_Workers | Female_Workers | <br>Christians | Sikhs | Budd |
|---------------|-------------------------|---------------|------------|--------|--------|----------|---------|--------------|----------------|----------------|-------|------|
| <b>0</b> 1    | JAMMU<br>AND<br>KASHMIR | Kupwara       | 870354     | 474190 | 396164 | 439654   | 229064  | 190899       | 38165          | <br>1700       | 5600  |      |
| 1 2           | JAMMU<br>AND<br>KASHMIR | Badgam        | 753745     | 398041 | 355704 | 335649   | 214866  | 162578       | 52288          | <br>1489       | 5559  |      |
| 2 3           | JAMMU<br>AND<br>KASHMIR | Leh(Ladakh)   | 133487     | 78971  | 54516  | 93770    | 75079   | 53265        | 21814          | <br>658        | 1092  | 8    |
| <b>3</b> 4    | JAMMU<br>AND<br>KASHMIR | Kargil        | 140802     | 77785  | 63017  | 86236    | 51873   | 39839        | 12034          | <br>604        | 1171  | 2    |
| <b>4</b> 5    | JAMMU<br>AND<br>KASHMIR | Punch         | 476835     | 251899 | 224936 | 261724   | 161393  | 117677       | 43716          | <br>958        | 11188 |      |

5 rows × 25 columns

In [8]: data.style.hide\_index()

Out[8]:

| District_code | State_name           | District_name | Population | Male   | Female | Literate | Workers | Male_Workers | Female_Workers | Cultivator_Workers |
|---------------|----------------------|---------------|------------|--------|--------|----------|---------|--------------|----------------|--------------------|
| 1             | JAMMU AND<br>KASHMIR | Kupwara       | 870354     | 474190 | 396164 | 439654   | 229064  | 190899       | 38165          | 34680              |
| 2             | JAMMU AND<br>KASHMIR | Badgam        | 753745     | 398041 | 355704 | 335649   | 214866  | 162578       | 52288          | 55299              |
| 3             | JAMMU AND<br>KASHMIR | Leh(Ladakh)   | 133487     | 78971  | 54516  | 93770    | 75079   | 53265        | 21814          | 20869              |
| 4             | JAMMU AND<br>KASHMIR | Kargil        | 140802     | 77785  | 63017  | 86236    | 51873   | 39839        | 12034          | 8266               |
| 5             | JAMMU AND<br>KASHMIR | Punch         | 476835     | 251899 | 224936 | 261724   | 161393  | 117677       | 43716          | 54264              |
| 6             | JAMMU AND<br>KASHMIR | Rajouri       | 642415     | 345351 | 297064 | 364109   | 290912  | 184752       | 106160         | 136527             |
| 7             | JAMMU AND<br>KASHMIR | Kathua        | 616435     | 326109 | 290326 | 389204   | 200431  | 161548       | 38883          | 69533              |
|               |                      |               |            |        |        |          |         |              |                |                    |

In [9]: data.head(2)

Out[9]:

|   | District_code | State_name              | District_name | Population | Male   | Female | Literate | Workers | Male_Workers | Female_Workers | <br>Christians | Sikhs | Budd |
|---|---------------|-------------------------|---------------|------------|--------|--------|----------|---------|--------------|----------------|----------------|-------|------|
| 0 | 1             | JAMMU<br>AND<br>KASHMIR | Kupwara       | 870354     | 474190 | 396164 | 439654   | 229064  | 190899       | 38165          | <br>1700       | 5600  |      |
| 1 | 2             | JAMMU<br>AND<br>KASHMIR | Badgam        | 753745     | 398041 | 355704 | 335649   | 214866  | 162578       | 52288          | <br>1489       | 5559  |      |

2 rows × 25 columns

In [10]: data.style.set\_caption('India Cencus 2011 dataset')

| 27 | 28 | PRADESH             | Hamirpur   | 454768  | 217070  | 237698  | 358091  | 241931 | 118724 | 123207 | 14  |
|----|----|---------------------|------------|---------|---------|---------|---------|--------|--------|--------|-----|
| 28 | 29 | HIMACHAL<br>PRADESH | Una        | 521173  | 263692  | 257481  | 399715  | 215346 | 141612 | 73734  | 8,  |
| 29 | 30 | HIMACHAL<br>PRADESH | Bilaspur   | 381956  | 192764  | 189192  | 287620  | 205871 | 111543 | 94328  | 12  |
| 30 | 31 | HIMACHAL<br>PRADESH | Solan      | 580320  | 308754  | 271566  | 428578  | 298737 | 190001 | 108736 | 14  |
| 31 | 32 | HIMACHAL<br>PRADESH | Sirmaur    | 529855  | 276289  | 253566  | 362645  | 280083 | 169399 | 110684 | 18: |
| 32 | 33 | HIMACHAL<br>PRADESH | Shimla     | 814010  | 425039  | 388971  | 612642  | 430926 | 258628 | 172298 | 24! |
| 33 | 34 | HIMACHAL<br>PRADESH | Kinnaur    | 84121   | 46249   | 37872   | 60699   | 56273  | 33863  | 22410  | 3;  |
| 34 | 35 | PUNJAB              | Gurdaspur  | 2298323 | 1212617 | 1085706 | 1634719 | 757138 | 637652 | 119486 | 14  |
| 35 | 36 | PUNJAB              | Kapurthala | 815168  | 426311  | 388857  | 576567  | 284165 | 235562 | 48603  | 5!  |
| 36 | 37 | PUNJAB              | Jalandhar  | 2193590 | 1145211 | 1048379 | 1622537 | 774472 | 639484 | 134988 | 8!  |

```
In [13]: data[data['District_name'].isin(['New Delhi','Lucknow','Jaipur'])]
```

Out[13]:

|     | District_code | State_name       | District_name | Population | Male    | Female  | Literate | Workers | Male_Workers | Female_Workers | <br>Christians | Sikhs |
|-----|---------------|------------------|---------------|------------|---------|---------|----------|---------|--------------|----------------|----------------|-------|
| 93  | 94            | NCT OF<br>DELHI  | New Delhi     | 142004     | 77942   | 64062   | 114179   | 59541   | 46940        | 12601          | <br>4852       | 2933  |
| 109 | 110           | RAJASTHAN        | Jaipur        | 6626178    | 3468507 | 3157671 | 4300965  | 2464893 | 1714947      | 749946         | <br>12708      | 18782 |
| 156 | 157           | UTTAR<br>PRADESH | Lucknow       | 4589838    | 2394476 | 2195362 | 3127260  | 1542806 | 1226399      | 316407         | <br>20493      | 23883 |

3 rows × 25 columns

In [14]: data.head(2)

Out[14]:

|   | District_code | State_name              | District_name | Population | Male   | Female | Literate | Workers | Male_Workers | Female_Workers | <br>Christians | Sikhs | Budd |
|---|---------------|-------------------------|---------------|------------|--------|--------|----------|---------|--------------|----------------|----------------|-------|------|
| 0 | 1             | JAMMU<br>AND<br>KASHMIR | Kupwara       | 870354     | 474190 | 396164 | 439654   | 229064  | 190899       | 38165          | <br>1700       | 5600  |      |
| 1 | 2             | JAMMU<br>AND<br>KASHMIR | Badgam        | 753745     | 398041 | 355704 | 335649   | 214866  | 162578       | 52288          | <br>1489       | 5559  |      |

2 rows × 25 columns

In [18]: data.groupby('State\_name').Population.sum().sort\_values(ascending=False)

Out[18]: State\_name

```
UTTAR PRADESH
                                199812341
MAHARASHTRA
                                112374333
BIHAR
                                104099452
WEST BENGAL
                                 91276115
ANDHRA PRADESH
                                 84580777
MADHYA PRADESH
                                 72626809
TAMIL NADU
                                 72147030
RAJASTHAN
                                 68548437
KARNATAKA
                                 61095297
GUJARAT
                                 60439692
ORISSA
                                 41974218
KERALA
                                 33406061
JHARKHAND
                                 32988134
ASSAM
                                 31205576
PUNJAB
                                 27743338
CHHATTISGARH
                                 25545198
HARYANA
                                 25351462
NCT OF DELHI
                                 16787941
JAMMU AND KASHMIR
                                 12541302
UTTARAKHAND
                                 10086292
HIMACHAL PRADESH
                                  6864602
TRIPURA
                                  3673917
MEGHALAYA
                                  2966889
MANIPUR
                                  2855794
NAGALAND
                                  1978502
GOA
                                  1458545
ARUNACHAL PRADESH
                                  1383727
PONDICHERRY
                                  1247953
MIZORAM
                                  1097206
CHANDIGARH
                                  1055450
SIKKIM
                                   610577
ANDAMAN AND NICOBAR ISLANDS
                                   380581
DADRA AND NAGAR HAVELI
                                   343709
DAMAN AND DIU
                                   243247
LAKSHADWEEP
                                    64473
Name: Population, dtype: int64
```

```
In [19]: data.columns
```

In [21]: data.groupby('State\_name')['Hindus', 'Muslims', 'Christians', 'Sikhs', 'Buddhists', 'Jains'].sum().sort\_values(b

/var/folders/44/2s67vdvx5bjgb7b3h87wlk\_80000gn/T/ipykernel\_69020/2422616884.py:1: FutureWarning: Indexing with multiple keys (implicitly converted to a tuple of keys) will be deprecated, use a list instead.

data.groupby('State\_name')['Hindus', 'Muslims', 'Christians', 'Sikhs', 'Buddhists', 'Jains'].sum().sort\_value s(by='Hindus')

## Out[21]:

|                             | Hindus    | Muslims  | Christians | Sikhs    | Buddhists | Jains   |
|-----------------------------|-----------|----------|------------|----------|-----------|---------|
| State_name                  |           |          |            |          |           |         |
| LAKSHADWEEP                 | 1788      | 62268    | 317        | 8        | 10        | 11      |
| MIZORAM                     | 30136     | 14832    | 956331     | 286      | 93411     | 376     |
| NAGALAND                    | 173054    | 48963    | 1739651    | 1890     | 6759      | 2655    |
| DAMAN AND DIU               | 220150    | 19277    | 2820       | 172      | 217       | 287     |
| ANDAMAN AND NICOBAR ISLANDS | 264296    | 32413    | 80984      | 1286     | 338       | 31      |
| DADRA AND NAGAR HAVELI      | 322857    | 12922    | 5113       | 217      | 634       | 1186    |
| MEGHALAYA                   | 342078    | 130399   | 2213027    | 3045     | 9864      | 627     |
| SIKKIM                      | 352662    | 9867     | 60522      | 1868     | 167216    | 314     |
| ARUNACHAL PRADESH           | 401876    | 27045    | 418732     | 3287     | 162815    | 771     |
| CHANDIGARH                  | 852574    | 51447    | 8720       | 138329   | 1160      | 1960    |
| GOA                         | 963877    | 121564   | 366130     | 1473     | 1095      | 1109    |
| PONDICHERRY                 | 1089409   | 75556    | 78550      | 297      | 451       | 1400    |
| MANIPUR                     | 1181876   | 239836   | 1179043    | 1527     | 7084      | 1692    |
| TRIPURA                     | 3063903   | 316042   | 159882     | 1070     | 125385    | 860     |
| JAMMU AND KASHMIR           | 3566674   | 8567485  | 35631      | 234848   | 112584    | 2490    |
| HIMACHAL PRADESH            | 6532765   | 149881   | 12646      | 79896    | 78659     | 1805    |
| UTTARAKHAND                 | 8368636   | 1406825  | 37781      | 236340   | 14926     | 9183    |
| PUNJAB                      | 10678138  | 535489   | 348230     | 16004754 | 33237     | 45040   |
| NCT OF DELHI                | 13712100  | 2158684  | 146093     | 570581   | 18449     | 166231  |
| KERALA                      | 18282492  | 8873472  | 6141269    | 3814     | 4752      | 4489    |
| ASSAM                       | 19180759  | 10679345 | 1165867    | 20672    | 54993     | 25949   |
| HARYANA                     | 22171128  | 1781342  | 50353      | 1243752  | 7514      | 52613   |
| JHARKHAND                   | 22376051  | 4793994  | 1418608    | 71422    | 8956      | 14974   |
| CHHATTISGARH                | 23819789  | 514998   | 490542     | 70036    | 70467     | 61510   |
| ORISSA                      | 39300341  | 911670   | 1161708    | 21991    | 13852     | 9420    |
| KARNATAKA                   | 51317472  | 7893065  | 1142647    | 28773    | 95710     | 440280  |
| GUJARAT                     | 53533988  | 5846761  | 316178     | 58246    | 30483     | 579654  |
| RAJASTHAN                   | 60657103  | 6215377  | 96430      | 872930   | 12185     | 622023  |
| TAMIL NADU                  | 63188168  | 4229479  | 4418331    | 14601    | 11186     | 89265   |
| WEST BENGAL                 | 64385546  | 24654825 | 658618     | 63523    | 282898    | 60141   |
| MADHYA PRADESH              | 66007121  | 4774695  | 213282     | 151412   | 216052    | 567028  |
| ANDHRA PRADESH              | 74824149  | 8082412  | 1129784    | 40244    | 36692     | 53849   |
| BIHAR                       | 86078686  | 17557809 | 129247     | 23779    | 25453     | 18914   |
| MAHARASHTRA                 | 89703057  | 12971152 | 1080073    | 223247   | 6531200   | 1400349 |
| UTTAR PRADESH               | 159312654 | 38483967 | 356448     | 643500   | 206285    | 213267  |
|                             |           |          |            |          |           |         |

In [22]: data.head(2)

Out[22]:

|   | District_code | State_name              | District_name | Population | Male   | Female | Literate | Workers | Male_Workers | Female_Workers | <br>Christians | Sikhs | Budd |
|---|---------------|-------------------------|---------------|------------|--------|--------|----------|---------|--------------|----------------|----------------|-------|------|
| 0 | 1             | JAMMU<br>AND<br>KASHMIR | Kupwara       | 870354     | 474190 | 396164 | 439654   | 229064  | 190899       | 38165          | <br>1700       | 5600  |      |
| 1 | 2             | JAMMU<br>AND<br>KASHMIR | Badgam        | 753745     | 398041 | 355704 | 335649   | 214866  | 162578       | 52288          | <br>1489       | 5559  |      |

2 rows × 25 columns

In [26]: data[data.State\_name == 'MAHARASHTRA']['Male\_Workers'].sum()

Out[26]: 32616875

In [27]: data.set\_index('District\_code')

Out[27]:

|               | State_name                        | District_name                  | Population | Male   | Female | Literate | Workers | Male_Workers | Female_Workers | Cultivator_Workers | Chri |
|---------------|-----------------------------------|--------------------------------|------------|--------|--------|----------|---------|--------------|----------------|--------------------|------|
| District_code |                                   |                                |            |        |        |          |         |              |                |                    |      |
| 1             | JAMMU AND<br>KASHMIR              | Kupwara                        | 870354     | 474190 | 396164 | 439654   | 229064  | 190899       | 38165          | 34680              |      |
| 2             | JAMMU AND<br>KASHMIR              | Badgam                         | 753745     | 398041 | 355704 | 335649   | 214866  | 162578       | 52288          | 55299              |      |
| 3             | JAMMU AND<br>KASHMIR              | Leh(Ladakh)                    | 133487     | 78971  | 54516  | 93770    | 75079   | 53265        | 21814          | 20869              |      |
| 4             | JAMMU AND<br>KASHMIR              | Kargil                         | 140802     | 77785  | 63017  | 86236    | 51873   | 39839        | 12034          | 8266               |      |
| 5             | JAMMU AND<br>KASHMIR              | Punch                          | 476835     | 251899 | 224936 | 261724   | 161393  | 117677       | 43716          | 54264              |      |
|               |                                   |                                |            |        |        |          |         |              |                |                    |      |
| 636           | PONDICHERRY                       | Mahe                           | 41816      | 19143  | 22673  | 36470    | 11802   | 9093         | 2709           | 43                 |      |
| 637           | PONDICHERRY                       | Karaikal                       | 200222     | 97809  | 102413 | 154916   | 68301   | 53139        | 15162          | 2372               |      |
| 638           | ANDAMAN<br>AND NICOBAR<br>ISLANDS | Nicobars                       | 36842      | 20727  | 16115  | 25332    | 17125   | 12714        | 4411           | 322                |      |
| 639           | ANDAMAN<br>AND NICOBAR<br>ISLANDS | North AND<br>Middle<br>Andaman | 105597     | 54861  | 50736  | 78683    | 38579   | 30612        | 7967           | 10727              |      |
| 640           | ANDAMAN<br>AND NICOBAR<br>ISLANDS | South<br>Andaman               | 238142     | 127283 | 110859 | 190266   | 96831   | 77563        | 19268          | 5518               |      |

640 rows × 24 columns

In [28]: data.add\_suffix('\_rightone')

Out[28]:

|    | District_code_rightone | State_name_rightone            | District_name_rightone      | Population_rightone | Male_rightone | Female_rightone | Literate_rightone | Workers |
|----|------------------------|--------------------------------|-----------------------------|---------------------|---------------|-----------------|-------------------|---------|
|    | 0 1                    | JAMMU AND<br>KASHMIR           | Kupwara                     | 870354              | 474190        | 396164          | 439654            |         |
|    | 1 2                    | JAMMU AND<br>KASHMIR           | Badgam                      | 753745              | 398041        | 355704          | 335649            |         |
|    | 2 3                    | JAMMU AND<br>KASHMIR           | Leh(Ladakh)                 | 133487              | 78971         | 54516           | 93770             |         |
|    | <b>3</b> 4             | JAMMU AND<br>KASHMIR           | Kargil                      | 140802              | 77785         | 63017           | 86236             |         |
|    | <b>4</b> 5             | JAMMU AND<br>KASHMIR           | Punch                       | 476835              | 251899        | 224936          | 261724            |         |
|    |                        |                                |                             |                     |               |                 |                   |         |
| 63 | <b>5</b> 636           | PONDICHERRY                    | Mahe                        | 41816               | 19143         | 22673           | 36470             |         |
| 63 | 637                    | PONDICHERRY                    | Karaikal                    | 200222              | 97809         | 102413          | 154916            |         |
| 63 | 638                    | ANDAMAN AND<br>NICOBAR ISLANDS | Nicobars                    | 36842               | 20727         | 16115           | 25332             |         |
| 63 | <b>88</b> 639          | ANDAMAN AND<br>NICOBAR ISLANDS | North AND Middle<br>Andaman | 105597              | 54861         | 50736           | 78683             |         |
| 63 | 640                    | ANDAMAN AND<br>NICOBAR ISLANDS | South Andaman               | 238142              | 127283        | 110859          | 190266            |         |
|    |                        |                                |                             |                     |               |                 |                   |         |

640 rows × 25 columns

In [29]: data.add\_prefix('leftone\_')

Out[29]:

|     | leftone_District_code | leftone_State_name             | leftone_District_name       | leftone_Population | leftone_Male | leftone_Female | leftone_Literate | leftone_Workers |
|-----|-----------------------|--------------------------------|-----------------------------|--------------------|--------------|----------------|------------------|-----------------|
| 0   | 1                     | JAMMU AND<br>KASHMIR           | Kupwara                     | 870354             | 474190       | 396164         | 439654           | 229064          |
| 1   | 2                     | JAMMU AND<br>KASHMIR           | Badgam                      | 753745             | 398041       | 355704         | 335649           | 214866          |
| 2   | 3                     | JAMMU AND<br>KASHMIR           | Leh(Ladakh)                 | 133487             | 78971        | 54516          | 93770            | 75079           |
| 3   | 4                     | JAMMU AND<br>KASHMIR           | Kargil                      | 140802             | 77785        | 63017          | 86236            | 51873           |
| 4   | 5                     | JAMMU AND<br>KASHMIR           | Punch                       | 476835             | 251899       | 224936         | 261724           | 161393          |
|     |                       |                                |                             |                    |              |                |                  |                 |
| 635 | 636                   | PONDICHERRY                    | Mahe                        | 41816              | 19143        | 22673          | 36470            | 11802           |
| 636 | 637                   | PONDICHERRY                    | Karaikal                    | 200222             | 97809        | 102413         | 154916           | 68301           |
| 637 | 638                   | ANDAMAN AND NICOBAR ISLANDS    | Nicobars                    | 36842              | 20727        | 16115          | 25332            | 17125           |
| 638 | 639                   | ANDAMAN AND<br>NICOBAR ISLANDS | North AND Middle<br>Andaman | 105597             | 54861        | 50736          | 78683            | 38579           |
| 639 | 640                   | ANDAMAN AND<br>NICOBAR ISLANDS | South Andaman               | 238142             | 127283       | 110859         | 190266           | 96831           |

640 rows × 25 columns

In [30]: data

Out[30]:

|     | District_code | State_name                        | District_name                  | Population | Male   | Female | Literate | Workers | Male_Workers | Female_Workers | <br>Christians | Sikhs |
|-----|---------------|-----------------------------------|--------------------------------|------------|--------|--------|----------|---------|--------------|----------------|----------------|-------|
| 0   | 1             | JAMMU AND<br>KASHMIR              | Kupwara                        | 870354     | 474190 | 396164 | 439654   | 229064  | 190899       | 38165          | <br>1700       | 5600  |
| 1   | 2             | JAMMU AND<br>KASHMIR              | Badgam                         | 753745     | 398041 | 355704 | 335649   | 214866  | 162578       | 52288          | <br>1489       | 5559  |
| 2   | 3             | JAMMU AND<br>KASHMIR              | Leh(Ladakh)                    | 133487     | 78971  | 54516  | 93770    | 75079   | 53265        | 21814          | <br>658        | 1092  |
| 3   | 4             | JAMMU AND<br>KASHMIR              | Kargil                         | 140802     | 77785  | 63017  | 86236    | 51873   | 39839        | 12034          | <br>604        | 1171  |
| 4   | 5             | JAMMU AND<br>KASHMIR              | Punch                          | 476835     | 251899 | 224936 | 261724   | 161393  | 117677       | 43716          | <br>958        | 11188 |
|     |               |                                   | •••                            |            |        |        |          |         |              |                | <br>           |       |
| 635 | 636           | PONDICHERRY                       | Mahe                           | 41816      | 19143  | 22673  | 36470    | 11802   | 9093         | 2709           | <br>958        | 3     |
| 636 | 637           | PONDICHERRY                       | Karaikal                       | 200222     | 97809  | 102413 | 154916   | 68301   | 53139        | 15162          | <br>18391      | 46    |
| 637 | 638           | ANDAMAN<br>AND NICOBAR<br>ISLANDS | Nicobars                       | 36842      | 20727  | 16115  | 25332    | 17125   | 12714        | 4411           | <br>26077      | 343   |
| 638 | 639           | ANDAMAN<br>AND NICOBAR<br>ISLANDS | North AND<br>Middle<br>Andaman | 105597     | 54861  | 50736  | 78683    | 38579   | 30612        | 7967           | <br>21870      | 77    |
| 639 | 640           | ANDAMAN<br>AND NICOBAR<br>ISLANDS | South<br>Andaman               | 238142     | 127283 | 110859 | 190266   | 96831   | 77563        | 19268          | <br>33037      | 866   |

640 rows × 25 columns

In []: