

MapApplyMerge => do research on

November 22, 2016

```
In [1]: import pandas as pd
```

```
In [2]: df = pd.read_csv('census.csv')
df
```

```
Out[2]:
```

	SUMLEV	REGION	DIVISION	STATE	COUNTY	STNAME	CTYNAM
0	40	3	6	1	0	Alabama	Alabam
1	50	3	6	1	1	Alabama	Autauga Count
2	50	3	6	1	3	Alabama	Baldwin Count
3	50	3	6	1	5	Alabama	Barbour Count
4	50	3	6	1	7	Alabama	Bibb Count
5	50	3	6	1	9	Alabama	Blount Count
6	50	3	6	1	11	Alabama	Bullock Count
7	50	3	6	1	13	Alabama	Butler Count
8	50	3	6	1	15	Alabama	Calhoun Count
9	50	3	6	1	17	Alabama	Chambers Count
10	50	3	6	1	19	Alabama	Cherokee Count
11	50	3	6	1	21	Alabama	Chilton Count
12	50	3	6	1	23	Alabama	Choctaw Count
13	50	3	6	1	25	Alabama	Clarke Count
14	50	3	6	1	27	Alabama	Clay Count
15	50	3	6	1	29	Alabama	Cleburne Count
16	50	3	6	1	31	Alabama	Coffee Count
17	50	3	6	1	33	Alabama	Colbert Count
18	50	3	6	1	35	Alabama	Conecuh Count
19	50	3	6	1	37	Alabama	Coosa Count
20	50	3	6	1	39	Alabama	Covington Count
21	50	3	6	1	41	Alabama	Crenshaw Count
22	50	3	6	1	43	Alabama	Cullman Count
23	50	3	6	1	45	Alabama	Dale Count
24	50	3	6	1	47	Alabama	Dallas Count
25	50	3	6	1	49	Alabama	DeKalb Count
26	50	3	6	1	51	Alabama	Elmore Count
27	50	3	6	1	53	Alabama	Escambia Count
28	50	3	6	1	55	Alabama	Etowah Count
29	50	3	6	1	57	Alabama	Fayette Count
...

3163	50	2	3	55	131	Wisconsin	Washington Count
3164	50	2	3	55	133	Wisconsin	Waukesha Count
3165	50	2	3	55	135	Wisconsin	Waupaca Count
3166	50	2	3	55	137	Wisconsin	Waushara Count
3167	50	2	3	55	139	Wisconsin	Winnebago Count
3168	50	2	3	55	141	Wisconsin	Wood Count
3169	40	4	8	56	0	Wyoming	Wyomir
3170	50	4	8	56	1	Wyoming	Albany Count
3171	50	4	8	56	3	Wyoming	Big Horn Count
3172	50	4	8	56	5	Wyoming	Campbell Count
3173	50	4	8	56	7	Wyoming	Carbon Count
3174	50	4	8	56	9	Wyoming	Converse Count
3175	50	4	8	56	11	Wyoming	Crook Count
3176	50	4	8	56	13	Wyoming	Fremont Count
3177	50	4	8	56	15	Wyoming	Goshen Count
3178	50	4	8	56	17	Wyoming	Hot Springs Count
3179	50	4	8	56	19	Wyoming	Johnson Count
3180	50	4	8	56	21	Wyoming	Laramie Count
3181	50	4	8	56	23	Wyoming	Lincoln Count
3182	50	4	8	56	25	Wyoming	Natrona Count
3183	50	4	8	56	27	Wyoming	Niobrara Count
3184	50	4	8	56	29	Wyoming	Park Count
3185	50	4	8	56	31	Wyoming	Platte Count
3186	50	4	8	56	33	Wyoming	Sheridan Count
3187	50	4	8	56	35	Wyoming	Sublette Count
3188	50	4	8	56	37	Wyoming	Sweetwater Count
3189	50	4	8	56	39	Wyoming	Teton Count
3190	50	4	8	56	41	Wyoming	Uinta Count
3191	50	4	8	56	43	Wyoming	Washakie Count
3192	50	4	8	56	45	Wyoming	Weston Count

	CENSUS2010POP	ESTIMATESBASE2010	POPESTIMATE2010	...	\
0	4779736	4780127	4785161	...	
1	54571	54571	54660	...	
2	182265	182265	183193	...	
3	27457	27457	27341	...	
4	22915	22919	22861	...	
5	57322	57322	57373	...	
6	10914	10915	10887	...	
7	20947	20946	20944	...	
8	118572	118586	118437	...	
9	34215	34170	34098	...	
10	25989	25986	25976	...	
11	43643	43631	43665	...	
12	13859	13858	13841	...	
13	25833	25840	25767	...	
14	13932	13932	13880	...	
15	14972	14972	14973	...	

16	49948	49948	50177	...
17	54428	54428	54514	...
18	13228	13228	13208	...
19	11539	11758	11758	...
20	37765	37765	37796	...
21	13906	13906	13853	...
22	80406	80410	80473	...
23	50251	50251	50358	...
24	43820	43820	43803	...
25	71109	71115	71142	...
26	79303	79296	79465	...
27	38319	38319	38309	...
28	104430	104427	104442	...
29	17241	17241	17231	...
...
3163	131887	131885	131967	...
3164	389891	389938	390076	...
3165	52410	52410	52422	...
3166	24496	24496	24506	...
3167	166994	166994	167059	...
3168	74749	74749	74807	...
3169	563626	563767	564516	...
3170	36299	36299	36428	...
3171	11668	11668	11672	...
3172	46133	46133	46244	...
3173	15885	15885	15837	...
3174	13833	13833	13826	...
3175	7083	7083	7114	...
3176	40123	40123	40222	...
3177	13249	13247	13408	...
3178	4812	4812	4813	...
3179	8569	8569	8581	...
3180	91738	91881	92271	...
3181	18106	18106	18091	...
3182	75450	75450	75472	...
3183	2484	2484	2492	...
3184	28205	28205	28259	...
3185	8667	8667	8678	...
3186	29116	29116	29146	...
3187	10247	10247	10244	...
3188	43806	43806	43593	...
3189	21294	21294	21297	...
3190	21118	21118	21102	...
3191	8533	8533	8545	...
3192	7208	7208	7181	...
	RDOMESTICMIG2011	RDOMESTICMIG2012	RDOMESTICMIG2013	RDOMESTICMIG2014
0	0.002295	-0.193196	0.381066	0.582000

1	7.242091	-2.915927	-3.012349	2.26597
2	14.832960	17.647293	21.845705	19.24328
3	-4.728132	-2.500690	-7.056824	-3.90421
4	-5.527043	-5.068871	-6.201001	-0.17753
5	1.807375	-1.177622	-1.748766	-2.06253
6	-30.953709	-5.180127	-1.130263	14.35429
7	-14.032727	-11.684234	-5.655413	1.08542
8	-6.155670	-4.611706	-5.524649	-4.46321
9	-2.731639	3.849092	2.872721	-2.28722
10	6.339327	1.113180	5.488706	-0.07680
11	-1.372935	-2.653369	0.480044	0.45601
12	-15.455274	-0.737028	-8.766391	-1.27498
13	-6.194363	-17.667705	-0.318345	-8.68642
14	-10.744102	-13.345130	4.902871	5.70264
15	-3.673524	-5.151880	7.345821	3.65448
16	0.377640	7.675579	-13.146535	-3.60285
17	-0.073423	1.065051	1.762390	1.83568
18	-4.861559	-7.504690	-6.107224	-14.64541
19	-33.930581	-10.291443	-4.313831	-22.95801
20	6.696899	-4.612668	0.740271	3.69793
21	1.729792	3.950156	-1.864936	3.08464
22	-1.404233	-1.019628	4.071247	5.08714
23	-10.749798	-5.277150	-15.236079	-11.97978
24	-15.635599	-11.308243	-16.745678	-9.34478
25	0.294677	-9.302391	-1.748807	0.26783
26	3.235576	0.822717	1.760531	-1.50705
27	-3.449988	-3.855889	-4.822706	-1.18983
28	-1.015919	2.062637	-1.931884	-1.72693
29	-5.015601	-0.646640	-3.725937	0.29674
...
3163	-0.794876	0.785279	-2.215465	1.60114
3164	-0.765799	2.128860	0.038132	0.76010
3165	3.111756	-2.241873	6.292687	-0.44103
3166	4.930022	-2.404973	-4.097017	-4.90671
3167	0.316712	2.889873	0.833819	-2.40619
3168	-4.081523	-5.019090	-6.901200	-5.59647
3169	-0.381530	9.636214	4.487115	-4.78827
3170	3.708956	2.637812	-3.544634	-3.33487
3171	4.868258	2.804930	16.815908	-8.02642
3172	-2.843479	15.601020	-5.895711	-8.55091
3173	-7.581980	-13.081441	3.178134	-2.97064
3174	-12.847499	15.493820	19.035533	-20.55058
3175	-1.544618	-4.202564	1.397819	6.37825
3176	2.747083	7.782673	-4.990688	-12.33163
3177	14.293649	3.961413	-8.079028	-7.01780
3178	3.322604	6.208609	3.095336	-6.01722
3179	4.995063	-4.058912	-0.812583	-10.71574
3180	-1.200428	15.547274	4.787847	-1.22613

3181	-9.802564	-11.566801	13.564556	6.12598
3182	7.189319	23.066162	24.322042	-0.95847
3183	-0.401849	0.806452	29.066295	-12.60338
3184	4.582951	8.057765	7.641997	-9.25243
3185	4.373094	5.392073	2.634593	6.05575
3186	0.958559	8.425487	4.546373	3.67800
3187	-23.741784	15.272374	-40.870074	-16.59627
3188	1.072643	16.243199	-5.339774	-14.25288
3189	-1.589565	0.972695	19.525929	14.14302
3190	-17.755986	-4.916350	-6.902954	-14.21586
3191	-11.637475	-0.827815	-2.013502	-17.78149
3192	-11.752361	-8.040059	12.372583	1.53363

	RDOMESTICMIG2015	RNETMIG2011	RNETMIG2012	RNETMIG2013	RNETMIG2014
0	-0.467369	1.030015	0.826644	1.383282	1.724718
1	-2.530799	7.606016	-2.626146	-2.722002	2.592270
2	17.197872	15.844176	18.559627	22.727626	20.317142
3	-10.543299	-4.874741	-2.758113	-7.167664	-3.978583
4	0.177258	-5.088389	-4.363636	-5.403729	0.754533
5	-1.369970	1.859511	-0.848580	-1.402476	-1.577232
6	-16.167247	-29.001673	-2.825524	1.507017	17.243790
7	-6.529805	-13.936612	-11.586865	-5.557058	1.184103
8	-3.376322	-5.791579	-4.092677	-5.062836	-3.912834
9	1.349468	-1.821092	4.701181	3.781439	-1.290228
10	-3.239866	6.416167	1.420264	5.757384	0.230419
11	-2.253483	-0.823761	-2.447504	0.868651	0.957636
12	-5.291205	-15.528177	-0.737028	-8.766391	-1.274984
13	-5.613667	-6.077488	-17.509958	-0.159172	-8.486280
14	3.912450	-10.816697	-13.345130	4.977157	5.776708
15	-3.123961	-3.673524	-5.151880	7.345821	3.654485
16	2.214774	2.166460	11.513368	-10.438741	-0.767822
17	-0.110260	0.513964	1.469035	2.276420	2.533249
18	2.684140	-4.861559	-7.504690	-6.107224	-14.645416
19	-5.387581	-34.017138	-10.380162	-4.403703	-23.049483
20	-0.316945	6.881460	-4.559952	0.793147	3.750759
21	3.439504	2.666763	5.099293	-0.502098	4.734577
22	7.915406	-1.031427	-0.634159	4.542916	5.593387
23	-5.107706	-9.575283	-0.776637	-12.640155	-9.503292
24	-14.687232	-15.727573	-11.378047	-16.792849	-9.368689
25	0.028141	1.375159	-8.656001	-1.029539	1.198187
26	2.067820	3.674511	1.558176	2.306047	-0.951175
27	1.190902	-3.397716	-3.803428	-4.769999	-1.136950
28	-2.082234	-0.632554	2.446383	-1.518596	-1.234901
29	-2.797536	-5.132243	-0.705426	-3.785079	0.237396
...
3163	-0.434498	-0.431504	1.162817	-1.763330	2.104796
3164	-0.719858	0.102448	3.180527	1.189727	2.077633
3165	-0.480617	3.359933	-2.011937	6.561277	-0.134227

3166	-4.397793	5.174486	-2.160399	-3.810226	-4.535615
3167	-4.557985	0.842573	3.502335	1.531624	-1.545153
3168	-3.958322	-3.733590	-4.562809	-6.442917	-5.040889
3169	-3.221091	0.289680	10.694870	5.440390	-3.727831
3170	-9.911169	6.736119	6.433032	0.719587	1.429233
3171	5.095861	4.868258	3.144921	17.236306	-7.608378
3172	10.916963	-2.649606	15.558684	-5.916543	-8.509402
3173	-23.300971	-7.392431	-12.636926	3.623073	-2.338590
3174	-0.070403	-12.774915	16.502720	20.093063	-19.358233
3175	18.629317	-0.982939	-3.642222	2.096729	7.071547
3176	-13.673610	3.093562	8.027411	-4.747240	-12.013555
3177	-11.899450	14.886132	4.841727	-6.903896	-5.761986
3178	-5.454164	5.191569	6.001656	2.888981	-6.224712
3179	0.933652	5.227392	-4.058912	-0.812583	-10.715742
3180	0.278940	-0.973320	17.914554	6.003143	-0.207819
3181	1.555544	-9.691801	-11.566801	13.619696	6.234414
3182	-0.061057	7.689674	23.749508	25.085233	-0.110593
3183	7.492114	-0.401849	0.806452	29.066295	-12.603387
3184	-2.878980	6.486639	11.127389	10.877797	-5.585731
3185	4.662270	4.373094	4.933173	2.176403	5.598720
3186	-3.298406	2.122524	9.342778	5.523001	4.781489
3187	-22.870900	-21.092907	16.828794	-39.211861	-14.409938
3188	-14.248864	1.255221	16.243199	-5.295460	-14.075283
3189	-0.564849	0.654527	2.408578	21.160658	16.308671
3190	-12.127022	-18.136812	-5.536861	-7.521840	-14.740608
3191	1.682288	-11.990126	-1.182592	-2.250385	-18.020168
3192	6.935294	-12.032179	-8.040059	12.372583	1.533635

RNETMIG2015

0	0.712594
1	-2.187333
2	18.293499
3	-10.543299
4	1.107861
5	-0.884411
6	-13.193961
7	-6.430868
8	-2.806406
9	2.346901
10	-2.931307
11	-1.752709
12	-5.291205
13	-5.411736
14	3.986270
15	-3.123961
16	5.350738
17	0.588052
18	2.684140

19	-5.387581
20	-0.264121
21	5.087600
22	8.417777
23	-1.998668
24	-14.711389
25	0.956790
26	2.757093
27	1.243830
28	-1.588308
29	-2.857058
...	...
3163	0.059931
3164	0.593567
3165	-0.173022
3166	-4.024395
3167	-3.685304
3168	-3.414223
3169	-2.091573
3170	-5.166460
3171	5.513554
3172	10.978525
3173	-22.600668
3174	1.126443
3175	19.309219
3176	-13.352750
3177	-10.635133
3178	-5.663940
3179	0.933652
3180	1.673640
3181	1.662823
3182	0.793743
3183	7.492114
3184	0.856839
3185	4.207414
3186	-2.198937
3187	-20.664059
3188	-14.070195
3189	1.520747
3190	-12.606351
3191	1.441961
3192	6.935294

[3193 rows x 100 columns]

```
In [3]: # drop NAs
        # Set Index
        # Rename Columns
```

```
(df.where(df['SUMLEV'] == 50)
.dropna()
.set_index(['STNAME', 'CTYNAME'])
.rename(columns={'ESTIMATEBASE2010': 'Estimates Base 2010'}))
```

```
Out[3]:
```

	STNAME	CTYNAME	SUMLEV	REGION	DIVISION	STATE	COUNTY	\
Alabama		Autauga County	50.0	3.0	6.0	1.0	1.0	
		Baldwin County	50.0	3.0	6.0	1.0	3.0	
		Barbour County	50.0	3.0	6.0	1.0	5.0	
		Bibb County	50.0	3.0	6.0	1.0	7.0	
		Blount County	50.0	3.0	6.0	1.0	9.0	
		Bullock County	50.0	3.0	6.0	1.0	11.0	
		Butler County	50.0	3.0	6.0	1.0	13.0	
		Calhoun County	50.0	3.0	6.0	1.0	15.0	
		Chambers County	50.0	3.0	6.0	1.0	17.0	
		Cherokee County	50.0	3.0	6.0	1.0	19.0	
		Chilton County	50.0	3.0	6.0	1.0	21.0	
		Choctaw County	50.0	3.0	6.0	1.0	23.0	
		Clarke County	50.0	3.0	6.0	1.0	25.0	
		Clay County	50.0	3.0	6.0	1.0	27.0	
		Cleburne County	50.0	3.0	6.0	1.0	29.0	
		Coffee County	50.0	3.0	6.0	1.0	31.0	
		Colbert County	50.0	3.0	6.0	1.0	33.0	
		Conecuh County	50.0	3.0	6.0	1.0	35.0	
		Coosa County	50.0	3.0	6.0	1.0	37.0	
		Covington County	50.0	3.0	6.0	1.0	39.0	
		Crenshaw County	50.0	3.0	6.0	1.0	41.0	
		Cullman County	50.0	3.0	6.0	1.0	43.0	
		Dale County	50.0	3.0	6.0	1.0	45.0	
		Dallas County	50.0	3.0	6.0	1.0	47.0	
		DeKalb County	50.0	3.0	6.0	1.0	49.0	
		Elmore County	50.0	3.0	6.0	1.0	51.0	
		Escambia County	50.0	3.0	6.0	1.0	53.0	
		Etowah County	50.0	3.0	6.0	1.0	55.0	
		Fayette County	50.0	3.0	6.0	1.0	57.0	
		Franklin County	50.0	3.0	6.0	1.0	59.0	
...			
Wisconsin		Washburn County	50.0	2.0	3.0	55.0	129.0	
		Washington County	50.0	2.0	3.0	55.0	131.0	
		Waukesha County	50.0	2.0	3.0	55.0	133.0	
		Waupaca County	50.0	2.0	3.0	55.0	135.0	
		Waushara County	50.0	2.0	3.0	55.0	137.0	
		Winnebago County	50.0	2.0	3.0	55.0	139.0	
		Wood County	50.0	2.0	3.0	55.0	141.0	
Wyoming		Albany County	50.0	4.0	8.0	56.0	1.0	
		Big Horn County	50.0	4.0	8.0	56.0	3.0	
		Campbell County	50.0	4.0	8.0	56.0	5.0	

Carbon County	50.0	4.0	8.0	56.0	7.0
Converse County	50.0	4.0	8.0	56.0	9.0
Crook County	50.0	4.0	8.0	56.0	11.0
Fremont County	50.0	4.0	8.0	56.0	13.0
Goshen County	50.0	4.0	8.0	56.0	15.0
Hot Springs County	50.0	4.0	8.0	56.0	17.0
Johnson County	50.0	4.0	8.0	56.0	19.0
Laramie County	50.0	4.0	8.0	56.0	21.0
Lincoln County	50.0	4.0	8.0	56.0	23.0
Natrona County	50.0	4.0	8.0	56.0	25.0
Niobrara County	50.0	4.0	8.0	56.0	27.0
Park County	50.0	4.0	8.0	56.0	29.0
Platte County	50.0	4.0	8.0	56.0	31.0
Sheridan County	50.0	4.0	8.0	56.0	33.0
Sublette County	50.0	4.0	8.0	56.0	35.0
Sweetwater County	50.0	4.0	8.0	56.0	37.0
Teton County	50.0	4.0	8.0	56.0	39.0
Uinta County	50.0	4.0	8.0	56.0	41.0
Washakie County	50.0	4.0	8.0	56.0	43.0
Weston County	50.0	4.0	8.0	56.0	45.0

STNAME	CTYNAME	CENSUS2010POP	ESTIMATESBASE2010 \
Alabama	Autauga County	54571.0	54571.0
	Baldwin County	182265.0	182265.0
	Barbour County	27457.0	27457.0
	Bibb County	22915.0	22919.0
	Blount County	57322.0	57322.0
	Bullock County	10914.0	10915.0
	Butler County	20947.0	20946.0
	Calhoun County	118572.0	118586.0
	Chambers County	34215.0	34170.0
	Cherokee County	25989.0	25986.0
	Chilton County	43643.0	43631.0
	Choctaw County	13859.0	13858.0
	Clarke County	25833.0	25840.0
	Clay County	13932.0	13932.0
	Cleburne County	14972.0	14972.0
	Coffee County	49948.0	49948.0
	Colbert County	54428.0	54428.0
	Conecuh County	13228.0	13228.0
	Coosa County	11539.0	11758.0
	Covington County	37765.0	37765.0
	Crenshaw County	13906.0	13906.0
	Cullman County	80406.0	80410.0
	Dale County	50251.0	50251.0
	Dallas County	43820.0	43820.0
	DeKalb County	71109.0	71115.0

	Elmore County	79303.0	79296.0
	Escambia County	38319.0	38319.0
	Etowah County	104430.0	104427.0
	Fayette County	17241.0	17241.0
	Franklin County	31704.0	31709.0
...	
Wisconsin	Washburn County	15911.0	15911.0
	Washington County	131887.0	131885.0
	Waukesha County	389891.0	389938.0
	Waupaca County	52410.0	52410.0
	Waushara County	24496.0	24496.0
	Winnebago County	166994.0	166994.0
	Wood County	74749.0	74749.0
Wyoming	Albany County	36299.0	36299.0
	Big Horn County	11668.0	11668.0
	Campbell County	46133.0	46133.0
	Carbon County	15885.0	15885.0
	Converse County	13833.0	13833.0
	Crook County	7083.0	7083.0
	Fremont County	40123.0	40123.0
	Goshen County	13249.0	13247.0
	Hot Springs County	4812.0	4812.0
	Johnson County	8569.0	8569.0
	Laramie County	91738.0	91881.0
	Lincoln County	18106.0	18106.0
	Natrona County	75450.0	75450.0
	Niobrara County	2484.0	2484.0
	Park County	28205.0	28205.0
	Platte County	8667.0	8667.0
	Sheridan County	29116.0	29116.0
	Sublette County	10247.0	10247.0
	Sweetwater County	43806.0	43806.0
	Teton County	21294.0	21294.0
	Uinta County	21118.0	21118.0
	Washakie County	8533.0	8533.0
	Weston County	7208.0	7208.0

STNAME	CTYNAME	POPESTIMATE2010	POPESTIMATE2011 \
Alabama	Autauga County	54660.0	55253.0
	Baldwin County	183193.0	186659.0
	Barbour County	27341.0	27226.0
	Bibb County	22861.0	22733.0
	Blount County	57373.0	57711.0
	Bullock County	10887.0	10629.0
	Butler County	20944.0	20673.0
	Calhoun County	118437.0	117768.0
	Chambers County	34098.0	33993.0

	Cherokee County	25976.0	26080.0
	Chilton County	43665.0	43739.0
	Choctaw County	13841.0	13593.0
	Clarke County	25767.0	25570.0
	Clay County	13880.0	13670.0
	Cleburne County	14973.0	14971.0
	Coffee County	50177.0	50448.0
	Colbert County	54514.0	54443.0
	Conecuh County	13208.0	13121.0
	Coosa County	11758.0	11348.0
	Covington County	37796.0	38060.0
	Crenshaw County	13853.0	13896.0
	Cullman County	80473.0	80469.0
	Dale County	50358.0	50109.0
	Dallas County	43803.0	43178.0
	DeKalb County	71142.0	71387.0
	Elmore County	79465.0	80012.0
	Escambia County	38309.0	38213.0
	Etowah County	104442.0	104236.0
	Fayette County	17231.0	17062.0
	Franklin County	31734.0	31729.0
...
Wisconsin	Washburn County	15930.0	15784.0
	Washington County	131967.0	132225.0
	Waukesha County	390076.0	390808.0
	Waupaca County	52422.0	52342.0
	Waushara County	24506.0	24581.0
	Winnebago County	167059.0	167630.0
	Wood County	74807.0	74647.0
Wyoming	Albany County	36428.0	36908.0
	Big Horn County	11672.0	11745.0
	Campbell County	46244.0	46600.0
	Carbon County	15837.0	15817.0
	Converse County	13826.0	13728.0
	Crook County	7114.0	7129.0
	Fremont County	40222.0	40591.0
	Goshen County	13408.0	13597.0
	Hot Springs County	4813.0	4818.0
	Johnson County	8581.0	8636.0
	Laramie County	92271.0	92663.0
	Lincoln County	18091.0	18022.0
	Natrona County	75472.0	76420.0
	Niobrara County	2492.0	2485.0
	Park County	28259.0	28473.0
	Platte County	8678.0	8701.0
	Sheridan County	29146.0	29275.0
	Sublette County	10244.0	10142.0
	Sweetwater County	43593.0	44041.0

	Teton County	21297.0	21482.0
	Uinta County	21102.0	20912.0
	Washakie County	8545.0	8469.0
	Weston County	7181.0	7114.0
		POPESTIMATE2012	...
			RDOMESTICMIG2012
STNAME	CTYNAME		
Alabama	Autauga County	55175.0	7.24209
	Baldwin County	190396.0	14.83296
	Barbour County	27159.0	-4.72813
	Bibb County	22642.0	-5.52704
	Blount County	57776.0	1.80737
	Bullock County	10606.0	-30.95370
	Butler County	20408.0	-14.03272
	Calhoun County	117286.0	-6.15567
	Chambers County	34075.0	-2.73163
	Cherokee County	26023.0	6.33932
	Chilton County	43697.0	-1.37293
	Choctaw County	13543.0	-15.45527
	Clarke County	25144.0	-6.19436
	Clay County	13456.0	-10.74410
	Cleburne County	14921.0	-3.67352
	Coffee County	51173.0	0.37764
	Colbert County	54472.0	-0.07342
	Conecuh County	12996.0	-4.86155
	Coosa County	11195.0	-33.93058
	Covington County	37818.0	6.69689
	Crenshaw County	13951.0	1.72979
	Cullman County	80374.0	-1.40423
	Dale County	50324.0	-10.74979
	Dallas County	42777.0	-15.63559
	DeKalb County	70942.0	0.29467
	Elmore County	80432.0	3.23557
	Escambia County	38034.0	-3.44998
	Etowah County	104235.0	-1.01591
	Fayette County	16960.0	-5.01560
	Franklin County	31648.0	-1.63875
...	
Wisconsin	Washburn County	15831.0	-6.87393
	Washington County	132649.0	-0.79487
	Waukesha County	392710.0	-0.76579
	Waupaca County	52035.0	3.11175
	Waushara County	24484.0	4.93002
	Winnebago County	168717.0	0.31671
	Wood County	74384.0	-4.08152
Wyoming	Albany County	37396.0	3.70895
	Big Horn County	11785.0	4.86825
	Campbell County	47881.0	-2.84347

Carbon County	15678.0	...	-7.58198
Converse County	14025.0	...	-12.84749
Crook County	7148.0	...	-1.54461
Fremont County	41129.0	...	2.74708
Goshen County	13666.0	...	14.29364
Hot Springs County	4846.0	...	3.32260
Johnson County	8610.0	...	4.99506
Laramie County	94894.0	...	-1.20042
Lincoln County	17943.0	...	-9.80256
Natrona County	78699.0	...	7.18931
Niobrara County	2475.0	...	-0.40184
Park County	28863.0	...	4.58295
Platte County	8732.0	...	4.37309
Sheridan County	29594.0	...	0.95855
Sublette County	10418.0	...	-23.74178
Sweetwater County	45104.0	...	1.07264
Teton County	21697.0	...	-1.58956
Uinta County	20989.0	...	-17.75598
Washakie County	8443.0	...	-11.63747
Weston County	7065.0	...	-11.75236

STNAME	CTYNAME	RDOMESTICMIG2012	RDOMESTICMIG2013	\
Alabama	Autauga County	-2.915927	-3.012349	
	Baldwin County	17.647293	21.845705	
	Barbour County	-2.500690	-7.056824	
	Bibb County	-5.068871	-6.201001	
	Blount County	-1.177622	-1.748766	
	Bullock County	-5.180127	-1.130263	
	Butler County	-11.684234	-5.655413	
	Calhoun County	-4.611706	-5.524649	
	Chambers County	3.849092	2.872721	
	Cherokee County	1.113180	5.488706	
	Chilton County	-2.653369	0.480044	
	Choctaw County	-0.737028	-8.766391	
	Clarke County	-17.667705	-0.318345	
	Clay County	-13.345130	4.902871	
	Cleburne County	-5.151880	7.345821	
	Coffee County	7.675579	-13.146535	
	Colbert County	1.065051	1.762390	
	Conecuh County	-7.504690	-6.107224	
	Coosa County	-10.291443	-4.313831	
	Covington County	-4.612668	0.740271	
	Crenshaw County	3.950156	-1.864936	
	Cullman County	-1.019628	4.071247	
	Dale County	-5.277150	-15.236079	
	Dallas County	-11.308243	-16.745678	
	DeKalb County	-9.302391	-1.748807	

	Elmore County	0.822717	1.760531
	Escambia County	-3.855889	-4.822706
	Etowah County	2.062637	-1.931884
	Fayette County	-0.646640	-3.725937
	Franklin County	-5.459394	-8.043702
...	
Wisconsin	Washburn County	7.338289	-6.732724
	Washington County	0.785279	-2.215465
	Waukesha County	2.128860	0.038132
	Waupaca County	-2.241873	6.292687
	Waushara County	-2.404973	-4.097017
	Winnebago County	2.889873	0.833819
	Wood County	-5.019090	-6.901200
Wyoming	Albany County	2.637812	-3.544634
	Big Horn County	2.804930	16.815908
	Campbell County	15.601020	-5.895711
	Carbon County	-13.081441	3.178134
	Converse County	15.493820	19.035533
	Crook County	-4.202564	1.397819
	Fremont County	7.782673	-4.990688
	Goshen County	3.961413	-8.079028
	Hot Springs County	6.208609	3.095336
	Johnson County	-4.058912	-0.812583
	Laramie County	15.547274	4.787847
	Lincoln County	-11.566801	13.564556
	Natrona County	23.066162	24.322042
	Niobrara County	0.806452	29.066295
	Park County	8.057765	7.641997
	Platte County	5.392073	2.634593
	Sheridan County	8.425487	4.546373
	Sublette County	15.272374	-40.870074
	Sweetwater County	16.243199	-5.339774
	Teton County	0.972695	19.525929
	Uinta County	-4.916350	-6.902954
	Washakie County	-0.827815	-2.013502
	Weston County	-8.040059	12.372583

STNAME	CTYNAME	RDOMESTICMIG2014	RDOMESTICMIG2015	RNETMIG20
Alabama	Autauga County	2.265971	-2.530799	7.6060
	Baldwin County	19.243287	17.197872	15.8441
	Barbour County	-3.904217	-10.543299	-4.8747
	Bibb County	-0.177537	0.177258	-5.0883
	Blount County	-2.062535	-1.369970	1.8595
	Bullock County	14.354290	-16.167247	-29.0016
	Butler County	1.085428	-6.529805	-13.9366
	Calhoun County	-4.463211	-3.376322	-5.7915
	Chambers County	-2.287222	1.349468	-1.8210

	Cherokee County	-0.076806	-3.239866	6.4161
	Chilton County	0.456017	-2.253483	-0.8237
	Choctaw County	-1.274984	-5.291205	-15.5281
	Clarke County	-8.686428	-5.613667	-6.0774
	Clay County	5.702648	3.912450	-10.8166
	Cleburne County	3.654485	-3.123961	-3.6735
	Coffee County	-3.602859	2.214774	2.1664
	Colbert County	1.835688	-0.110260	0.5139
	Conecuh County	-14.645416	2.684140	-4.8615
	Coosa County	-22.958017	-5.387581	-34.0171
	Covington County	3.697932	-0.316945	6.8814
	Crenshaw County	3.084648	3.439504	2.6667
	Cullman County	5.087142	7.915406	-1.0314
	Dale County	-11.979785	-5.107706	-9.5752
	Dallas County	-9.344789	-14.687232	-15.7275
	DeKalb County	0.267830	0.028141	1.3751
	Elmore County	-1.507057	2.067820	3.6745
	Escambia County	-1.189831	1.190902	-3.3977
	Etowah County	-1.726932	-2.082234	-0.6325
	Fayette County	0.296745	-2.797536	-5.1322
	Franklin County	-1.267849	-2.401719	0.0630
...
Wisconsin	Washburn County	3.510452	-5.123279	-6.7478
	Washington County	1.601149	-0.434498	-0.4315
	Waukesha County	0.760109	-0.719858	0.1024
	Waupaca County	-0.441031	-0.480617	3.3599
	Waushara County	-4.906711	-4.397793	5.1744
	Winnebago County	-2.406192	-4.557985	0.8425
	Wood County	-5.596471	-3.958322	-3.7335
Wyoming	Albany County	-3.334877	-9.911169	6.7361
	Big Horn County	-8.026420	5.095861	4.8682
	Campbell County	-8.550911	10.916963	-2.6490
	Carbon County	-2.970641	-23.300971	-7.3924
	Converse County	-20.550587	-0.070403	-12.7749
	Crook County	6.378258	18.629317	-0.9829
	Fremont County	-12.331633	-13.673610	3.0935
	Goshen County	-7.017803	-11.899450	14.8861
	Hot Springs County	-6.017222	-5.454164	5.1915
	Johnson County	-10.715742	0.933652	5.2273
	Laramie County	-1.226133	0.278940	-0.9733
	Lincoln County	6.125989	1.555544	-9.6918
	Natrona County	-0.958472	-0.061057	7.6896
	Niobrara County	-12.603387	7.492114	-0.4018
	Park County	-9.252437	-2.878980	6.4866
	Platte County	6.055759	4.662270	4.3730
	Sheridan County	3.678069	-3.298406	2.1225
	Sublette County	-16.596273	-22.870900	-21.0929
	Sweetwater County	-14.252889	-14.248864	1.2552

	Teton County	14.143021	-0.564849	0.6545
	Uinta County	-14.215862	-12.127022	-18.1368
	Washakie County	-17.781491	1.682288	-11.9901
	Weston County	1.533635	6.935294	-12.0321
		RNETMIG2012	RNETMIG2013	RNETMIG2014 \
STNAME	CTYNAME			
Alabama	Autauga County	-2.626146	-2.722002	2.592270
	Baldwin County	18.559627	22.727626	20.317142
	Barbour County	-2.758113	-7.167664	-3.978583
	Bibb County	-4.363636	-5.403729	0.754533
	Blount County	-0.848580	-1.402476	-1.577232
	Bullock County	-2.825524	1.507017	17.243790
	Butler County	-11.586865	-5.557058	1.184103
	Calhoun County	-4.092677	-5.062836	-3.912834
	Chambers County	4.701181	3.781439	-1.290228
	Cherokee County	1.420264	5.757384	0.230419
	Chilton County	-2.447504	0.868651	0.957636
	Choctaw County	-0.737028	-8.766391	-1.274984
	Clarke County	-17.509958	-0.159172	-8.486280
	Clay County	-13.345130	4.977157	5.776708
	Cleburne County	-5.151880	7.345821	3.654485
	Coffee County	11.513368	-10.438741	-0.767822
	Colbert County	1.469035	2.276420	2.533249
	Conecuh County	-7.504690	-6.107224	-14.645416
	Coosa County	-10.380162	-4.403703	-23.049483
	Covington County	-4.559952	0.793147	3.750759
	Crenshaw County	5.099293	-0.502098	4.734577
	Cullman County	-0.634159	4.542916	5.593387
	Dale County	-0.776637	-12.640155	-9.503292
	Dallas County	-11.378047	-16.792849	-9.368689
	DeKalb County	-8.656001	-1.029539	1.198187
	Elmore County	1.558176	2.306047	-0.951175
	Escambia County	-3.803428	-4.769999	-1.136950
	Etowah County	2.446383	-1.518596	-1.234901
	Fayette County	-0.705426	-3.785079	0.237396
	Franklin County	-3.471291	-5.700261	1.553115
...
Wisconsin	Washburn County	7.464811	-6.605691	3.638104
	Washington County	1.162817	-1.763330	2.104796
	Waukesha County	3.180527	1.189727	2.077633
	Waupaca County	-2.011937	6.561277	-0.134227
	Waushara County	-2.160399	-3.810226	-4.535615
	Winnebago County	3.502335	1.531624	-1.545153
	Wood County	-4.562809	-6.442917	-5.040889
Wyoming	Albany County	6.433032	0.719587	1.429233
	Big Horn County	3.144921	17.236306	-7.608378
	Campbell County	15.558684	-5.916543	-8.509402

Carbon County	-12.636926	3.623073	-2.338590
Converse County	16.502720	20.093063	-19.358233
Crook County	-3.642222	2.096729	7.071547
Fremont County	8.027411	-4.747240	-12.013555
Goshen County	4.841727	-6.903896	-5.761986
Hot Springs County	6.001656	2.888981	-6.224712
Johnson County	-4.058912	-0.812583	-10.715742
Laramie County	17.914554	6.003143	-0.207819
Lincoln County	-11.566801	13.619696	6.234414
Natrona County	23.749508	25.085233	-0.110593
Niobrara County	0.806452	29.066295	-12.603387
Park County	11.127389	10.877797	-5.585731
Platte County	4.933173	2.176403	5.598720
Sheridan County	9.342778	5.523001	4.781489
Sublette County	16.828794	-39.211861	-14.409938
Sweetwater County	16.243199	-5.295460	-14.075283
Teton County	2.408578	21.160658	16.308671
Uinta County	-5.536861	-7.521840	-14.740608
Washakie County	-1.182592	-2.250385	-18.020168
Weston County	-8.040059	12.372583	1.533635

RNETMIG2015

STNAME	CTYNAME	
Alabama	Autauga County	-2.187333
	Baldwin County	18.293499
	Barbour County	-10.543299
	Bibb County	1.107861
	Blount County	-0.884411
	Bullock County	-13.193961
	Butler County	-6.430868
	Calhoun County	-2.806406
	Chambers County	2.346901
	Cherokee County	-2.931307
	Chilton County	-1.752709
	Choctaw County	-5.291205
	Clarke County	-5.411736
	Clay County	3.986270
	Cleburne County	-3.123961
	Coffee County	5.350738
	Colbert County	0.588052
	Conecuh County	2.684140
	Coosa County	-5.387581
	Covington County	-0.264121
	Crenshaw County	5.087600
	Cullman County	8.417777
	Dale County	-1.998668
	Dallas County	-14.711389
	DeKalb County	0.956790

	Elmore County	2.757093
	Escambia County	1.243830
	Etowah County	-1.588308
	Fayette County	-2.857058
	Franklin County	0.442422
...		...
Wisconsin	Washburn County	-4.995197
	Washington County	0.059931
	Waukesha County	0.593567
	Waupaca County	-0.173022
	Waushara County	-4.024395
	Winnebago County	-3.685304
	Wood County	-3.414223
Wyoming	Albany County	-5.166460
	Big Horn County	5.513554
	Campbell County	10.978525
	Carbon County	-22.600668
	Converse County	1.126443
	Crook County	19.309219
	Fremont County	-13.352750
	Goshen County	-10.635133
	Hot Springs County	-5.663940
	Johnson County	0.933652
	Laramie County	1.673640
	Lincoln County	1.662823
	Natrona County	0.793743
	Niobrara County	7.492114
	Park County	0.856839
	Platte County	4.207414
	Sheridan County	-2.198937
	Sublette County	-20.664059
	Sweetwater County	-14.070195
	Teton County	1.520747
	Uinta County	-12.606351
	Washakie County	1.441961
	Weston County	6.935294

[3142 rows x 98 columns]

```
In [4]: df = df[df['SUMLEV'] == 50]
df.set_index(['STNAME', 'CTYNAME'], inplace=True)
df.rename(columns={'ESTIMATESBASE2010' : 'Estimates Base 2010'})
```

```
Out[4]:
```

STNAME	CTYNAME	SUMLEV	REGION	DIVISION	STATE	COUNTY	\
Alabama	Autauga County	50	3	6	1	1	
	Baldwin County	50	3	6	1	3	
	Barbour County	50	3	6	1	5	

	Bibb County	50	3	6	1	7
	Blount County	50	3	6	1	9
	Bullock County	50	3	6	1	11
	Butler County	50	3	6	1	13
	Calhoun County	50	3	6	1	15
	Chambers County	50	3	6	1	17
	Cherokee County	50	3	6	1	19
	Chilton County	50	3	6	1	21
	Choctaw County	50	3	6	1	23
	Clarke County	50	3	6	1	25
	Clay County	50	3	6	1	27
	Cleburne County	50	3	6	1	29
	Coffee County	50	3	6	1	31
	Colbert County	50	3	6	1	33
	Conecuh County	50	3	6	1	35
	Coosa County	50	3	6	1	37
	Covington County	50	3	6	1	39
	Crenshaw County	50	3	6	1	41
	Cullman County	50	3	6	1	43
	Dale County	50	3	6	1	45
	Dallas County	50	3	6	1	47
	DeKalb County	50	3	6	1	49
	Elmore County	50	3	6	1	51
	Escambia County	50	3	6	1	53
	Etowah County	50	3	6	1	55
	Fayette County	50	3	6	1	57
	Franklin County	50	3	6	1	59
...
Wisconsin	Washburn County	50	2	3	55	129
	Washington County	50	2	3	55	131
	Waukesha County	50	2	3	55	133
	Waupaca County	50	2	3	55	135
	Waushara County	50	2	3	55	137
	Winnebago County	50	2	3	55	139
	Wood County	50	2	3	55	141
Wyoming	Albany County	50	4	8	56	1
	Big Horn County	50	4	8	56	3
	Campbell County	50	4	8	56	5
	Carbon County	50	4	8	56	7
	Converse County	50	4	8	56	9
	Crook County	50	4	8	56	11
	Fremont County	50	4	8	56	13
	Goshen County	50	4	8	56	15
	Hot Springs County	50	4	8	56	17
	Johnson County	50	4	8	56	19
	Laramie County	50	4	8	56	21
	Lincoln County	50	4	8	56	23
	Natrona County	50	4	8	56	25

Niobrara County	50	4	8	56	27
Park County	50	4	8	56	29
Platte County	50	4	8	56	31
Sheridan County	50	4	8	56	33
Sublette County	50	4	8	56	35
Sweetwater County	50	4	8	56	37
Teton County	50	4	8	56	39
Uinta County	50	4	8	56	41
Washakie County	50	4	8	56	43
Weston County	50	4	8	56	45

STNAME	CTYNAME	CENSUS2010POP	Estimates	Base 2010	\
Alabama	Autauga County	54571		54571	
	Baldwin County	182265		182265	
	Barbour County	27457		27457	
	Bibb County	22915		22919	
	Blount County	57322		57322	
	Bullock County	10914		10915	
	Butler County	20947		20946	
	Calhoun County	118572		118586	
	Chambers County	34215		34170	
	Cherokee County	25989		25986	
	Chilton County	43643		43631	
	Choctaw County	13859		13858	
	Clarke County	25833		25840	
	Clay County	13932		13932	
	Cleburne County	14972		14972	
	Coffee County	49948		49948	
	Colbert County	54428		54428	
	Conecuh County	13228		13228	
	Coosa County	11539		11758	
	Covington County	37765		37765	
	Crenshaw County	13906		13906	
	Cullman County	80406		80410	
	Dale County	50251		50251	
	Dallas County	43820		43820	
	DeKalb County	71109		71115	
	Elmore County	79303		79296	
	Escambia County	38319		38319	
	Etowah County	104430		104427	
	Fayette County	17241		17241	
	Franklin County	31704		31709	
	
Wisconsin	Washburn County	15911		15911	
	Washington County	131887		131885	
	Waukesha County	389891		389938	
	Waupaca County	52410		52410	

Wyoming	Waushara County	24496	24496
	Winnebago County	166994	166994
	Wood County	74749	74749
	Albany County	36299	36299
	Big Horn County	11668	11668
	Campbell County	46133	46133
	Carbon County	15885	15885
	Converse County	13833	13833
	Crook County	7083	7083
	Fremont County	40123	40123
	Goshen County	13249	13247
	Hot Springs County	4812	4812
	Johnson County	8569	8569
	Laramie County	91738	91881
	Lincoln County	18106	18106
	Natrona County	75450	75450
	Niobrara County	2484	2484
	Park County	28205	28205
	Platte County	8667	8667
	Sheridan County	29116	29116
	Sublette County	10247	10247
	Sweetwater County	43806	43806
	Teton County	21294	21294
	Uinta County	21118	21118
Washakie County	8533	8533	
Weston County	7208	7208	

STNAME	CTYNAME	POPESTIMATE2010	POPESTIMATE2011 \
Alabama	Autauga County	54660	55253
	Baldwin County	183193	186659
	Barbour County	27341	27226
	Bibb County	22861	22733
	Blount County	57373	57711
	Bullock County	10887	10629
	Butler County	20944	20673
	Calhoun County	118437	117768
	Chambers County	34098	33993
	Cherokee County	25976	26080
	Chilton County	43665	43739
	Choctaw County	13841	13593
	Clarke County	25767	25570
	Clay County	13880	13670
	Cleburne County	14973	14971
	Coffee County	50177	50448
	Colbert County	54514	54443
	Conecuh County	13208	13121
	Coosa County	11758	11348

	Covington County	37796	38060
	Crenshaw County	13853	13896
	Cullman County	80473	80469
	Dale County	50358	50109
	Dallas County	43803	43178
	DeKalb County	71142	71387
	Elmore County	79465	80012
	Escambia County	38309	38213
	Etowah County	104442	104236
	Fayette County	17231	17062
	Franklin County	31734	31729
...
Wisconsin	Washburn County	15930	15784
	Washington County	131967	132225
	Waukesha County	390076	390808
	Waupaca County	52422	52342
	Waushara County	24506	24581
	Winnebago County	167059	167630
	Wood County	74807	74647
Wyoming	Albany County	36428	36908
	Big Horn County	11672	11745
	Campbell County	46244	46600
	Carbon County	15837	15817
	Converse County	13826	13728
	Crook County	7114	7129
	Fremont County	40222	40591
	Goshen County	13408	13597
	Hot Springs County	4813	4818
	Johnson County	8581	8636
	Laramie County	92271	92663
	Lincoln County	18091	18022
	Natrona County	75472	76420
	Niobrara County	2492	2485
	Park County	28259	28473
	Platte County	8678	8701
	Sheridan County	29146	29275
	Sublette County	10244	10142
	Sweetwater County	43593	44041
	Teton County	21297	21482
	Uinta County	21102	20912
	Washakie County	8545	8469
	Weston County	7181	7114
		POPESTIMATE2012	...
STNAME	CTYNAME		...
Alabama	Autauga County	55175	...
	Baldwin County	190396	...
	Barbour County	27159	...
			RDOMESTICMIG2012
			7.24209
			14.83296
			-4.72813

	Bibb County	22642	...	-5.52704
	Blount County	57776	...	1.80737
	Bullock County	10606	...	-30.95370
	Butler County	20408	...	-14.03272
	Calhoun County	117286	...	-6.15567
	Chambers County	34075	...	-2.73163
	Cherokee County	26023	...	6.33932
	Chilton County	43697	...	-1.37293
	Choctaw County	13543	...	-15.45527
	Clarke County	25144	...	-6.19436
	Clay County	13456	...	-10.74410
	Cleburne County	14921	...	-3.67352
	Coffee County	51173	...	0.37764
	Colbert County	54472	...	-0.07342
	Conecuh County	12996	...	-4.86155
	Coosa County	11195	...	-33.93058
	Covington County	37818	...	6.69689
	Crenshaw County	13951	...	1.72979
	Cullman County	80374	...	-1.40423
	Dale County	50324	...	-10.74979
	Dallas County	42777	...	-15.63559
	DeKalb County	70942	...	0.29467
	Elmore County	80432	...	3.23557
	Escambia County	38034	...	-3.44998
	Etowah County	104235	...	-1.01591
	Fayette County	16960	...	-5.01560
	Franklin County	31648	...	-1.63875
...
Wisconsin	Washburn County	15831	...	-6.87393
	Washington County	132649	...	-0.79487
	Waukesha County	392710	...	-0.76579
	Waupaca County	52035	...	3.11175
	Waushara County	24484	...	4.93002
	Winnebago County	168717	...	0.31671
	Wood County	74384	...	-4.08152
Wyoming	Albany County	37396	...	3.70895
	Big Horn County	11785	...	4.86825
	Campbell County	47881	...	-2.84347
	Carbon County	15678	...	-7.58198
	Converse County	14025	...	-12.84749
	Crook County	7148	...	-1.54461
	Fremont County	41129	...	2.74708
	Goshen County	13666	...	14.29364
	Hot Springs County	4846	...	3.32260
	Johnson County	8610	...	4.99506
	Laramie County	94894	...	-1.20042
	Lincoln County	17943	...	-9.80256
	Natrona County	78699	...	7.18931

Niobrara County	2475	...	-0.40184
Park County	28863	...	4.58295
Platte County	8732	...	4.37309
Sheridan County	29594	...	0.95855
Sublette County	10418	...	-23.74178
Sweetwater County	45104	...	1.07264
Teton County	21697	...	-1.58956
Uinta County	20989	...	-17.75598
Washakie County	8443	...	-11.63747
Weston County	7065	...	-11.75236

STNAME	CTYNAME	RDOMESTICMIG2012	RDOMESTICMIG2013	\
Alabama	Autauga County	-2.915927	-3.012349	
	Baldwin County	17.647293	21.845705	
	Barbour County	-2.500690	-7.056824	
	Bibb County	-5.068871	-6.201001	
	Blount County	-1.177622	-1.748766	
	Bullock County	-5.180127	-1.130263	
	Butler County	-11.684234	-5.655413	
	Calhoun County	-4.611706	-5.524649	
	Chambers County	3.849092	2.872721	
	Cherokee County	1.113180	5.488706	
	Chilton County	-2.653369	0.480044	
	Choctaw County	-0.737028	-8.766391	
	Clarke County	-17.667705	-0.318345	
	Clay County	-13.345130	4.902871	
	Cleburne County	-5.151880	7.345821	
	Coffee County	7.675579	-13.146535	
	Colbert County	1.065051	1.762390	
	Conecuh County	-7.504690	-6.107224	
	Coosa County	-10.291443	-4.313831	
	Covington County	-4.612668	0.740271	
	Crenshaw County	3.950156	-1.864936	
	Cullman County	-1.019628	4.071247	
	Dale County	-5.277150	-15.236079	
	Dallas County	-11.308243	-16.745678	
	DeKalb County	-9.302391	-1.748807	
	Elmore County	0.822717	1.760531	
	Escambia County	-3.855889	-4.822706	
	Etowah County	2.062637	-1.931884	
	Fayette County	-0.646640	-3.725937	
	Franklin County	-5.459394	-8.043702	
...		
Wisconsin	Washburn County	7.338289	-6.732724	
	Washington County	0.785279	-2.215465	
	Waukesha County	2.128860	0.038132	
	Waupaca County	-2.241873	6.292687	

Wyoming	Waushara County	-2.404973	-4.097017
	Winnebago County	2.889873	0.833819
	Wood County	-5.019090	-6.901200
	Albany County	2.637812	-3.544634
	Big Horn County	2.804930	16.815908
	Campbell County	15.601020	-5.895711
	Carbon County	-13.081441	3.178134
	Converse County	15.493820	19.035533
	Crook County	-4.202564	1.397819
	Fremont County	7.782673	-4.990688
	Goshen County	3.961413	-8.079028
	Hot Springs County	6.208609	3.095336
	Johnson County	-4.058912	-0.812583
	Laramie County	15.547274	4.787847
	Lincoln County	-11.566801	13.564556
	Natrona County	23.066162	24.322042
	Niobrara County	0.806452	29.066295
	Park County	8.057765	7.641997
	Platte County	5.392073	2.634593
	Sheridan County	8.425487	4.546373
	Sublette County	15.272374	-40.870074
	Sweetwater County	16.243199	-5.339774
	Teton County	0.972695	19.525929
	Uinta County	-4.916350	-6.902954
	Washakie County	-0.827815	-2.013502
	Weston County	-8.040059	12.372583

STNAME	CTYNAME	RDOMESTICMIG2014	RDOMESTICMIG2015	RNETMIG20
Alabama	Autauga County	2.265971	-2.530799	7.6060
	Baldwin County	19.243287	17.197872	15.8441
	Barbour County	-3.904217	-10.543299	-4.8747
	Bibb County	-0.177537	0.177258	-5.0883
	Blount County	-2.062535	-1.369970	1.8595
	Bullock County	14.354290	-16.167247	-29.0016
	Butler County	1.085428	-6.529805	-13.9366
	Calhoun County	-4.463211	-3.376322	-5.7915
	Chambers County	-2.287222	1.349468	-1.8210
	Cherokee County	-0.076806	-3.239866	6.4161
	Chilton County	0.456017	-2.253483	-0.8237
	Choctaw County	-1.274984	-5.291205	-15.5281
	Clarke County	-8.686428	-5.613667	-6.0774
	Clay County	5.702648	3.912450	-10.8166
	Cleburne County	3.654485	-3.123961	-3.6735
	Coffee County	-3.602859	2.214774	2.1664
	Colbert County	1.835688	-0.110260	0.5139
	Conecuh County	-14.645416	2.684140	-4.8615
	Coosa County	-22.958017	-5.387581	-34.0171

	Covington County	3.697932	-0.316945	6.8814
	Crenshaw County	3.084648	3.439504	2.6667
	Cullman County	5.087142	7.915406	-1.0314
	Dale County	-11.979785	-5.107706	-9.5752
	Dallas County	-9.344789	-14.687232	-15.7275
	DeKalb County	0.267830	0.028141	1.3751
	Elmore County	-1.507057	2.067820	3.6745
	Escambia County	-1.189831	1.190902	-3.3977
	Etowah County	-1.726932	-2.082234	-0.6325
	Fayette County	0.296745	-2.797536	-5.1322
	Franklin County	-1.267849	-2.401719	0.0630
...
Wisconsin	Washburn County	3.510452	-5.123279	-6.7478
	Washington County	1.601149	-0.434498	-0.4315
	Waukesha County	0.760109	-0.719858	0.1024
	Waupaca County	-0.441031	-0.480617	3.3599
	Waushara County	-4.906711	-4.397793	5.1744
	Winnebago County	-2.406192	-4.557985	0.8425
	Wood County	-5.596471	-3.958322	-3.7335
Wyoming	Albany County	-3.334877	-9.911169	6.7361
	Big Horn County	-8.026420	5.095861	4.8682
	Campbell County	-8.550911	10.916963	-2.6496
	Carbon County	-2.970641	-23.300971	-7.3924
	Converse County	-20.550587	-0.070403	-12.7749
	Crook County	6.378258	18.629317	-0.9829
	Fremont County	-12.331633	-13.673610	3.0935
	Goshen County	-7.017803	-11.899450	14.8861
	Hot Springs County	-6.017222	-5.454164	5.1915
	Johnson County	-10.715742	0.933652	5.2273
	Laramie County	-1.226133	0.278940	-0.9733
	Lincoln County	6.125989	1.555544	-9.6918
	Natrona County	-0.958472	-0.061057	7.6896
	Niobrara County	-12.603387	7.492114	-0.4018
	Park County	-9.252437	-2.878980	6.4866
	Platte County	6.055759	4.662270	4.3730
	Sheridan County	3.678069	-3.298406	2.1225
	Sublette County	-16.596273	-22.870900	-21.0929
	Sweetwater County	-14.252889	-14.248864	1.2552
	Teton County	14.143021	-0.564849	0.6545
	Uinta County	-14.215862	-12.127022	-18.1368
	Washakie County	-17.781491	1.682288	-11.9901
	Weston County	1.533635	6.935294	-12.0321
		RNETMIG2012	RNETMIG2013	RNETMIG2014 \
STNAME	CTYNAME			
Alabama	Autauga County	-2.626146	-2.722002	2.592270
	Baldwin County	18.559627	22.727626	20.317142
	Barbour County	-2.758113	-7.167664	-3.978583

	Bibb County	-4.363636	-5.403729	0.754533
	Blount County	-0.848580	-1.402476	-1.577232
	Bullock County	-2.825524	1.507017	17.243790
	Butler County	-11.586865	-5.557058	1.184103
	Calhoun County	-4.092677	-5.062836	-3.912834
	Chambers County	4.701181	3.781439	-1.290228
	Cherokee County	1.420264	5.757384	0.230419
	Chilton County	-2.447504	0.868651	0.957636
	Choctaw County	-0.737028	-8.766391	-1.274984
	Clarke County	-17.509958	-0.159172	-8.486280
	Clay County	-13.345130	4.977157	5.776708
	Cleburne County	-5.151880	7.345821	3.654485
	Coffee County	11.513368	-10.438741	-0.767822
	Colbert County	1.469035	2.276420	2.533249
	Conecuh County	-7.504690	-6.107224	-14.645416
	Coosa County	-10.380162	-4.403703	-23.049483
	Covington County	-4.559952	0.793147	3.750759
	Crenshaw County	5.099293	-0.502098	4.734577
	Cullman County	-0.634159	4.542916	5.593387
	Dale County	-0.776637	-12.640155	-9.503292
	Dallas County	-11.378047	-16.792849	-9.368689
	DeKalb County	-8.656001	-1.029539	1.198187
	Elmore County	1.558176	2.306047	-0.951175
	Escambia County	-3.803428	-4.769999	-1.136950
	Etowah County	2.446383	-1.518596	-1.234901
	Fayette County	-0.705426	-3.785079	0.237396
	Franklin County	-3.471291	-5.700261	1.553115
...
Wisconsin	Washburn County	7.464811	-6.605691	3.638104
	Washington County	1.162817	-1.763330	2.104796
	Waukesha County	3.180527	1.189727	2.077633
	Waupaca County	-2.011937	6.561277	-0.134227
	Waushara County	-2.160399	-3.810226	-4.535615
	Winnebago County	3.502335	1.531624	-1.545153
	Wood County	-4.562809	-6.442917	-5.040889
Wyoming	Albany County	6.433032	0.719587	1.429233
	Big Horn County	3.144921	17.236306	-7.608378
	Campbell County	15.558684	-5.916543	-8.509402
	Carbon County	-12.636926	3.623073	-2.338590
	Converse County	16.502720	20.093063	-19.358233
	Crook County	-3.642222	2.096729	7.071547
	Fremont County	8.027411	-4.747240	-12.013555
	Goshen County	4.841727	-6.903896	-5.761986
	Hot Springs County	6.001656	2.888981	-6.224712
	Johnson County	-4.058912	-0.812583	-10.715742
	Laramie County	17.914554	6.003143	-0.207819
	Lincoln County	-11.566801	13.619696	6.234414
	Natrona County	23.749508	25.085233	-0.110593

Niobrara County	0.806452	29.066295	-12.603387
Park County	11.127389	10.877797	-5.585731
Platte County	4.933173	2.176403	5.598720
Sheridan County	9.342778	5.523001	4.781489
Sublette County	16.828794	-39.211861	-14.409938
Sweetwater County	16.243199	-5.295460	-14.075283
Teton County	2.408578	21.160658	16.308671
Uinta County	-5.536861	-7.521840	-14.740608
Washakie County	-1.182592	-2.250385	-18.020168
Weston County	-8.040059	12.372583	1.533635

RNETMIG2015

STNAME	CTYNAME	
Alabama	Autauga County	-2.187333
	Baldwin County	18.293499
	Barbour County	-10.543299
	Bibb County	1.107861
	Blount County	-0.884411
	Bullock County	-13.193961
	Butler County	-6.430868
	Calhoun County	-2.806406
	Chambers County	2.346901
	Cherokee County	-2.931307
	Chilton County	-1.752709
	Choctaw County	-5.291205
	Clarke County	-5.411736
	Clay County	3.986270
	Cleburne County	-3.123961
	Coffee County	5.350738
	Colbert County	0.588052
	Conecuh County	2.684140
	Coosa County	-5.387581
	Covington County	-0.264121
	Crenshaw County	5.087600
	Cullman County	8.417777
	Dale County	-1.998668
	Dallas County	-14.711389
	DeKalb County	0.956790
	Elmore County	2.757093
	Escambia County	1.243830
	Etowah County	-1.588308
	Fayette County	-2.857058
	Franklin County	0.442422
...	...	
Wisconsin	Washburn County	-4.995197
	Washington County	0.059931
	Waukesha County	0.593567
	Waupaca County	-0.173022

	Wauslara County	-4.024395
	Winnebago County	-3.685304
	Wood County	-3.414223
Wyoming	Albany County	-5.166460
	Big Horn County	5.513554
	Campbell County	10.978525
	Carbon County	-22.600668
	Converse County	1.126443
	Crook County	19.309219
	Fremont County	-13.352750
	Goshen County	-10.635133
	Hot Springs County	-5.663940
	Johnson County	0.933652
	Laramie County	1.673640
	Lincoln County	1.662823
	Natrona County	0.793743
	Niobrara County	7.492114
	Park County	0.856839
	Platte County	4.207414
	Sheridan County	-2.198937
	Sublette County	-20.664059
	Sweetwater County	-14.070195
	Teton County	1.520747
	Uinta County	-12.606351
	Washakie County	1.441961
	Weston County	6.935294

[3142 rows x 98 columns]

```
In [5]: # Suppose we are working on a DataFrame that holds information
# on our equipment for an upcoming backpacking trip
# Use the method chaining to modify the DataFrame df in one statement to
# any entries where 'Quantity' is 0 and rename the column 'Weight' to 'Weight(oz.)'

# print(df.head())
# df = df[df.Quantity != 0]
# df.rename(columns={'Weight' : 'Weight(oz.)'})

In [7]: # Their solution:

# print(df.drop(df[df['Quantity'] == 0].index).rename(columns={'Weight': 'Weight(oz.)'}))

In [8]: # Map => Apply
import numpy as np

In [9]: import numpy as np
def min_max(row):
    data = row[['POPESTIMATE2010',
                'POPESTIMATE2011',
```

```

        'POPESTIMATE2012',
        'POPESTIMATE2013',
        'POPESTIMATE2014',
        'POPESTIMATE2015']]
    return pd.Series({'min': np.min(data), 'max': np.max(data)})

```

```

In [11]: # function and axis => Parameter of index to use
df.apply(min_max, axis=1).head()

```

```

Out[11]:
           max      min
STNAME  CTYNAME
Alabama Autauga County    55347.0    54660.0
        Baldwin County   203709.0   183193.0
        Barbour County    27341.0    26489.0
        Bibb County       22861.0    22512.0
        Blount County     57776.0    57373.0

```

```

In [12]: import numpy as np
def min_max(row):
    data = row[['POPESTIMATE2010',
                 'POPESTIMATE2011',
                 'POPESTIMATE2012',
                 'POPESTIMATE2013',
                 'POPESTIMATE2014',
                 'POPESTIMATE2015']]
    row['max'] = np.max(data)
    row['min'] = np.min(data)
    return row
df.apply(min_max, axis=1)

```

```

Out[12]:
           SUMLEV  REGION  DIVISION  STATE  COUNTY  \
STNAME  CTYNAME
Alabama Autauga County    50.0     3.0     6.0     1.0     1.0
        Baldwin County    50.0     3.0     6.0     1.0     3.0
        Barbour County    50.0     3.0     6.0     1.0     5.0
        Bibb County       50.0     3.0     6.0     1.0     7.0
        Blount County     50.0     3.0     6.0     1.0     9.0
        Bullock County    50.0     3.0     6.0     1.0    11.0
        Butler County     50.0     3.0     6.0     1.0    13.0
        Calhoun County    50.0     3.0     6.0     1.0    15.0
        Chambers County   50.0     3.0     6.0     1.0    17.0
        Cherokee County   50.0     3.0     6.0     1.0    19.0
        Chilton County    50.0     3.0     6.0     1.0    21.0
        Choctaw County    50.0     3.0     6.0     1.0    23.0
        Clarke County     50.0     3.0     6.0     1.0    25.0
        Clay County       50.0     3.0     6.0     1.0    27.0
        Cleburne County   50.0     3.0     6.0     1.0    29.0
        Coffee County     50.0     3.0     6.0     1.0    31.0
        Colbert County    50.0     3.0     6.0     1.0    33.0

```

	Conecuh County	50.0	3.0	6.0	1.0	35.0
	Coosa County	50.0	3.0	6.0	1.0	37.0
	Covington County	50.0	3.0	6.0	1.0	39.0
	Crenshaw County	50.0	3.0	6.0	1.0	41.0
	Cullman County	50.0	3.0	6.0	1.0	43.0
	Dale County	50.0	3.0	6.0	1.0	45.0
	Dallas County	50.0	3.0	6.0	1.0	47.0
	DeKalb County	50.0	3.0	6.0	1.0	49.0
	Elmore County	50.0	3.0	6.0	1.0	51.0
	Escambia County	50.0	3.0	6.0	1.0	53.0
	Etowah County	50.0	3.0	6.0	1.0	55.0
	Fayette County	50.0	3.0	6.0	1.0	57.0
	Franklin County	50.0	3.0	6.0	1.0	59.0
...
Wisconsin	Washburn County	50.0	2.0	3.0	55.0	129.0
	Washington County	50.0	2.0	3.0	55.0	131.0
	Waukesha County	50.0	2.0	3.0	55.0	133.0
	Waupaca County	50.0	2.0	3.0	55.0	135.0
	Waushara County	50.0	2.0	3.0	55.0	137.0
	Winnebago County	50.0	2.0	3.0	55.0	139.0
	Wood County	50.0	2.0	3.0	55.0	141.0
Wyoming	Albany County	50.0	4.0	8.0	56.0	1.0
	Big Horn County	50.0	4.0	8.0	56.0	3.0
	Campbell County	50.0	4.0	8.0	56.0	5.0
	Carbon County	50.0	4.0	8.0	56.0	7.0
	Converse County	50.0	4.0	8.0	56.0	9.0
	Crook County	50.0	4.0	8.0	56.0	11.0
	Fremont County	50.0	4.0	8.0	56.0	13.0
	Goshen County	50.0	4.0	8.0	56.0	15.0
	Hot Springs County	50.0	4.0	8.0	56.0	17.0
	Johnson County	50.0	4.0	8.0	56.0	19.0
	Laramie County	50.0	4.0	8.0	56.0	21.0
	Lincoln County	50.0	4.0	8.0	56.0	23.0
	Natrona County	50.0	4.0	8.0	56.0	25.0
	Niobrara County	50.0	4.0	8.0	56.0	27.0
	Park County	50.0	4.0	8.0	56.0	29.0
	Platte County	50.0	4.0	8.0	56.0	31.0
	Sheridan County	50.0	4.0	8.0	56.0	33.0
	Sublette County	50.0	4.0	8.0	56.0	35.0
	Sweetwater County	50.0	4.0	8.0	56.0	37.0
	Teton County	50.0	4.0	8.0	56.0	39.0
	Uinta County	50.0	4.0	8.0	56.0	41.0
	Washakie County	50.0	4.0	8.0	56.0	43.0
	Weston County	50.0	4.0	8.0	56.0	45.0

CENSUS2010POP ESTIMATESBASE2010 \

STNAME	CTYNAME		
Alabama	Autauga County	54571.0	54571.0

	Baldwin County	182265.0	182265.0
	Barbour County	27457.0	27457.0
	Bibb County	22915.0	22919.0
	Blount County	57322.0	57322.0
	Bullock County	10914.0	10915.0
	Butler County	20947.0	20946.0
	Calhoun County	118572.0	118586.0
	Chambers County	34215.0	34170.0
	Cherokee County	25989.0	25986.0
	Chilton County	43643.0	43631.0
	Choctaw County	13859.0	13858.0
	Clarke County	25833.0	25840.0
	Clay County	13932.0	13932.0
	Cleburne County	14972.0	14972.0
	Coffee County	49948.0	49948.0
	Colbert County	54428.0	54428.0
	Conecuh County	13228.0	13228.0
	Coosa County	11539.0	11758.0
	Covington County	37765.0	37765.0
	Crenshaw County	13906.0	13906.0
	Cullman County	80406.0	80410.0
	Dale County	50251.0	50251.0
	Dallas County	43820.0	43820.0
	DeKalb County	71109.0	71115.0
	Elmore County	79303.0	79296.0
	Escambia County	38319.0	38319.0
	Etowah County	104430.0	104427.0
	Fayette County	17241.0	17241.0
	Franklin County	31704.0	31709.0
...
Wisconsin	Washburn County	15911.0	15911.0
	Washington County	131887.0	131885.0
	Waukesha County	389891.0	389938.0
	Waupaca County	52410.0	52410.0
	Waushara County	24496.0	24496.0
	Winnebago County	166994.0	166994.0
	Wood County	74749.0	74749.0
Wyoming	Albany County	36299.0	36299.0
	Big Horn County	11668.0	11668.0
	Campbell County	46133.0	46133.0
	Carbon County	15885.0	15885.0
	Converse County	13833.0	13833.0
	Crook County	7083.0	7083.0
	Fremont County	40123.0	40123.0
	Goshen County	13249.0	13247.0
	Hot Springs County	4812.0	4812.0
	Johnson County	8569.0	8569.0
	Laramie County	91738.0	91881.0

Lincoln County	18106.0	18106.0
Natrona County	75450.0	75450.0
Niobrara County	2484.0	2484.0
Park County	28205.0	28205.0
Platte County	8667.0	8667.0
Sheridan County	29116.0	29116.0
Sublette County	10247.0	10247.0
Sweetwater County	43806.0	43806.0
Teton County	21294.0	21294.0
Uinta County	21118.0	21118.0
Washakie County	8533.0	8533.0
Weston County	7208.0	7208.0

STNAME	CTYNAME	POPESTIMATE2010	POPESTIMATE2011 \
Alabama	Autauga County	54660.0	55253.0
	Baldwin County	183193.0	186659.0
	Barbour County	27341.0	27226.0
	Bibb County	22861.0	22733.0
	Blount County	57373.0	57711.0
	Bullock County	10887.0	10629.0
	Butler County	20944.0	20673.0
	Calhoun County	118437.0	117768.0
	Chambers County	34098.0	33993.0
	Cherokee County	25976.0	26080.0
	Chilton County	43665.0	43739.0
	Choctaw County	13841.0	13593.0
	Clarke County	25767.0	25570.0
	Clay County	13880.0	13670.0
	Cleburne County	14973.0	14971.0
	Coffee County	50177.0	50448.0
	Colbert County	54514.0	54443.0
	Conecuh County	13208.0	13121.0
	Coosa County	11758.0	11348.0
	Covington County	37796.0	38060.0
	Crenshaw County	13853.0	13896.0
	Cullman County	80473.0	80469.0
	Dale County	50358.0	50109.0
	Dallas County	43803.0	43178.0
	DeKalb County	71142.0	71387.0
	Elmore County	79465.0	80012.0
	Escambia County	38309.0	38213.0
	Etowah County	104442.0	104236.0
	Fayette County	17231.0	17062.0
	Franklin County	31734.0	31729.0
...
Wisconsin	Washburn County	15930.0	15784.0
	Washington County	131967.0	132225.0

	Waukesha County	390076.0	390808.0
	Waupaca County	52422.0	52342.0
	Waushara County	24506.0	24581.0
	Winnebago County	167059.0	167630.0
	Wood County	74807.0	74647.0
Wyoming	Albany County	36428.0	36908.0
	Big Horn County	11672.0	11745.0
	Campbell County	46244.0	46600.0
	Carbon County	15837.0	15817.0
	Converse County	13826.0	13728.0
	Crook County	7114.0	7129.0
	Fremont County	40222.0	40591.0
	Goshen County	13408.0	13597.0
	Hot Springs County	4813.0	4818.0
	Johnson County	8581.0	8636.0
	Laramie County	92271.0	92663.0
	Lincoln County	18091.0	18022.0
	Natrona County	75472.0	76420.0
	Niobrara County	2492.0	2485.0
	Park County	28259.0	28473.0
	Platte County	8678.0	8701.0
	Sheridan County	29146.0	29275.0
	Sublette County	10244.0	10142.0
	Sweetwater County	43593.0	44041.0
	Teton County	21297.0	21482.0
	Uinta County	21102.0	20912.0
	Washakie County	8545.0	8469.0
	Weston County	7181.0	7114.0

		POPESTIMATE2012	...	RDOMESTICMIG2013
STNAME	CTYNAME		...	
Alabama	Autauga County	55175.0	...	-3.012349
	Baldwin County	190396.0	...	21.845705
	Barbour County	27159.0	...	-7.056824
	Bibb County	22642.0	...	-6.201001
	Blount County	57776.0	...	-1.748766
	Bullock County	10606.0	...	-1.130263
	Butler County	20408.0	...	-5.655413
	Calhoun County	117286.0	...	-5.524649
	Chambers County	34075.0	...	2.872721
	Cherokee County	26023.0	...	5.488706
	Chilton County	43697.0	...	0.480044
	Choctaw County	13543.0	...	-8.766391
	Clarke County	25144.0	...	-0.318345
	Clay County	13456.0	...	4.902871
	Cleburne County	14921.0	...	7.345821
	Coffee County	51173.0	...	-13.146535
	Colbert County	54472.0	...	1.762390

	Conecuh County	12996.0	...	-6.1207224
	Coosa County	11195.0	...	-4.313831
	Covington County	37818.0	...	0.740271
	Crenshaw County	13951.0	...	-1.864936
	Cullman County	80374.0	...	4.071247
	Dale County	50324.0	...	-15.236079
	Dallas County	42777.0	...	-16.745678
	DeKalb County	70942.0	...	-1.748807
	Elmore County	80432.0	...	1.760531
	Escambia County	38034.0	...	-4.822706
	Etowah County	104235.0	...	-1.931884
	Fayette County	16960.0	...	-3.725937
	Franklin County	31648.0	...	-8.043702
...
Wisconsin	Washburn County	15831.0	...	-6.732724
	Washington County	132649.0	...	-2.215465
	Waukesha County	392710.0	...	0.038132
	Waupaca County	52035.0	...	6.292687
	Waushara County	24484.0	...	-4.097017
	Winnebago County	168717.0	...	0.833819
Wyoming	Wood County	74384.0	...	-6.901200
	Albany County	37396.0	...	-3.544634
	Big Horn County	11785.0	...	16.815908
	Campbell County	47881.0	...	-5.895711
	Carbon County	15678.0	...	3.178134
	Converse County	14025.0	...	19.035533
	Crook County	7148.0	...	1.397819
	Fremont County	41129.0	...	-4.990688
	Goshen County	13666.0	...	-8.079028
	Hot Springs County	4846.0	...	3.095336
	Johnson County	8610.0	...	-0.812583
	Laramie County	94894.0	...	4.787847
	Lincoln County	17943.0	...	13.564556
	Natrona County	78699.0	...	24.322042
	Niobrara County	2475.0	...	29.066295
	Park County	28863.0	...	7.641997
	Platte County	8732.0	...	2.634593
	Sheridan County	29594.0	...	4.546373
	Sublette County	10418.0	...	-40.870074
	Sweetwater County	45104.0	...	-5.339774
	Teton County	21697.0	...	19.525929
	Uinta County	20989.0	...	-6.902954
Washakie County	8443.0	...	-2.013502	
Weston County	7065.0	...	12.372583	
		RDOMESTICMIG2014	RDOMESTICMIG2015	RNETMIG
STNAME	CTYNAME			
Alabama	Autauga County	2.265971	-2.530799	7.60

	Baldwin County	19.243287	17.197872	15.844
	Barbour County	-3.904217	-10.543299	-4.874
	Bibb County	-0.177537	0.177258	-5.088
	Blount County	-2.062535	-1.369970	1.859
	Bullock County	14.354290	-16.167247	-29.001
	Butler County	1.085428	-6.529805	-13.936
	Calhoun County	-4.463211	-3.376322	-5.791
	Chambers County	-2.287222	1.349468	-1.821
	Cherokee County	-0.076806	-3.239866	6.416
	Chilton County	0.456017	-2.253483	-0.823
	Choctaw County	-1.274984	-5.291205	-15.528
	Clarke County	-8.686428	-5.613667	-6.077
	Clay County	5.702648	3.912450	-10.816
	Cleburne County	3.654485	-3.123961	-3.673
	Coffee County	-3.602859	2.214774	2.166
	Colbert County	1.835688	-0.110260	0.513
	Conecuh County	-14.645416	2.684140	-4.861
	Coosa County	-22.958017	-5.387581	-34.017
	Covington County	3.697932	-0.316945	6.881
	Crenshaw County	3.084648	3.439504	2.666
	Cullman County	5.087142	7.915406	-1.031
	Dale County	-11.979785	-5.107706	-9.575
	Dallas County	-9.344789	-14.687232	-15.727
	DeKalb County	0.267830	0.028141	1.375
	Elmore County	-1.507057	2.067820	3.674
	Escambia County	-1.189831	1.190902	-3.397
	Etowah County	-1.726932	-2.082234	-0.632
	Fayette County	0.296745	-2.797536	-5.132
	Franklin County	-1.267849	-2.401719	0.063
...
Wisconsin	Washburn County	3.510452	-5.123279	-6.747
	Washington County	1.601149	-0.434498	-0.431
	Waukesha County	0.760109	-0.719858	0.102
	Waupaca County	-0.441031	-0.480617	3.359
	Waushara County	-4.906711	-4.397793	5.174
	Winnebago County	-2.406192	-4.557985	0.842
	Wood County	-5.596471	-3.958322	-3.733
Wyoming	Albany County	-3.334877	-9.911169	6.736
	Big Horn County	-8.026420	5.095861	4.868
	Campbell County	-8.550911	10.916963	-2.649
	Carbon County	-2.970641	-23.300971	-7.392
	Converse County	-20.550587	-0.070403	-12.774
	Crook County	6.378258	18.629317	-0.982
	Fremont County	-12.331633	-13.673610	3.093
	Goshen County	-7.017803	-11.899450	14.886
	Hot Springs County	-6.017222	-5.454164	5.191
	Johnson County	-10.715742	0.933652	5.227
	Laramie County	-1.226133	0.278940	-0.973

Lincoln County	6.125989	1.555544	-9.691
Natrona County	-0.958472	-0.061057	7.689
Niobrara County	-12.603387	7.492114	-0.401
Park County	-9.252437	-2.878980	6.486
Platte County	6.055759	4.662270	4.373
Sheridan County	3.678069	-3.298406	2.122
Sublette County	-16.596273	-22.870900	-21.092
Sweetwater County	-14.252889	-14.248864	1.255
Teton County	14.143021	-0.564849	0.654
Uinta County	-14.215862	-12.127022	-18.136
Washakie County	-17.781491	1.682288	-11.990
Weston County	1.533635	6.935294	-12.032

STNAME	CTYNAME	RNETMIG2012	RNETMIG2013	RNETMIG2014	\
Alabama	Autauga County	-2.626146	-2.722002	2.592270	
	Baldwin County	18.559627	22.727626	20.317142	
	Barbour County	-2.758113	-7.167664	-3.978583	
	Bibb County	-4.363636	-5.403729	0.754533	
	Blount County	-0.848580	-1.402476	-1.577232	
	Bullock County	-2.825524	1.507017	17.243790	
	Butler County	-11.586865	-5.557058	1.184103	
	Calhoun County	-4.092677	-5.062836	-3.912834	
	Chambers County	4.701181	3.781439	-1.290228	
	Cherokee County	1.420264	5.757384	0.230419	
	Chilton County	-2.447504	0.868651	0.957636	
	Choctaw County	-0.737028	-8.766391	-1.274984	
	Clarke County	-17.509958	-0.159172	-8.486280	
	Clay County	-13.345130	4.977157	5.776708	
	Cleburne County	-5.151880	7.345821	3.654485	
	Coffee County	11.513368	-10.438741	-0.767822	
	Colbert County	1.469035	2.276420	2.533249	
	Conecuh County	-7.504690	-6.107224	-14.645416	
	Coosa County	-10.380162	-4.403703	-23.049483	
	Covington County	-4.559952	0.793147	3.750759	
	Crenshaw County	5.099293	-0.502098	4.734577	
	Cullman County	-0.634159	4.542916	5.593387	
	Dale County	-0.776637	-12.640155	-9.503292	
	Dallas County	-11.378047	-16.792849	-9.368689	
	DeKalb County	-8.656001	-1.029539	1.198187	
	Elmore County	1.558176	2.306047	-0.951175	
	Escambia County	-3.803428	-4.769999	-1.136950	
	Etowah County	2.446383	-1.518596	-1.234901	
	Fayette County	-0.705426	-3.785079	0.237396	
	Franklin County	-3.471291	-5.700261	1.553115	
...	
Wisconsin	Washburn County	7.464811	-6.605691	3.638104	
	Washington County	1.162817	-1.763330	2.104796	

	Waukesha County	3.180527	1.189727	2.077633
	Waupaca County	-2.011937	6.561277	-0.134227
	Waushara County	-2.160399	-3.810226	-4.535615
	Winnebago County	3.502335	1.531624	-1.545153
	Wood County	-4.562809	-6.442917	-5.040889
Wyoming	Albany County	6.433032	0.719587	1.429233
	Big Horn County	3.144921	17.236306	-7.608378
	Campbell County	15.558684	-5.916543	-8.509402
	Carbon County	-12.636926	3.623073	-2.338590
	Converse County	16.502720	20.093063	-19.358233
	Crook County	-3.642222	2.096729	7.071547
	Fremont County	8.027411	-4.747240	-12.013555
	Goshen County	4.841727	-6.903896	-5.761986
	Hot Springs County	6.001656	2.888981	-6.224712
	Johnson County	-4.058912	-0.812583	-10.715742
	Laramie County	17.914554	6.003143	-0.207819
	Lincoln County	-11.566801	13.619696	6.234414
	Natrona County	23.749508	25.085233	-0.110593
	Niobrara County	0.806452	29.066295	-12.603387
	Park County	11.127389	10.877797	-5.585731
	Platte County	4.933173	2.176403	5.598720
	Sheridan County	9.342778	5.523001	4.781489
	Sublette County	16.828794	-39.211861	-14.409938
	Sweetwater County	16.243199	-5.295460	-14.075283
	Teton County	2.408578	21.160658	16.308671
	Uinta County	-5.536861	-7.521840	-14.740608
	Washakie County	-1.182592	-2.250385	-18.020168
	Weston County	-8.040059	12.372583	1.533635

STNAME	CTYNAME	RNETMIG2015	max	min
Alabama	Autauga County	-2.187333	55347.0	54660.0
	Baldwin County	18.293499	203709.0	183193.0
	Barbour County	-10.543299	27341.0	26489.0
	Bibb County	1.107861	22861.0	22512.0
	Blount County	-0.884411	57776.0	57373.0
	Bullock County	-13.193961	10887.0	10606.0
	Butler County	-6.430868	20944.0	20154.0
	Calhoun County	-2.806406	118437.0	115620.0
	Chambers County	2.346901	34153.0	33993.0
	Cherokee County	-2.931307	26084.0	25859.0
	Chilton County	-1.752709	43943.0	43665.0
	Choctaw County	-5.291205	13841.0	13170.0
	Clarke County	-5.411736	25767.0	24675.0
	Clay County	3.986270	13880.0	13456.0
	Cleburne County	-3.123961	15072.0	14921.0
	Coffee County	5.350738	51211.0	50177.0
	Colbert County	0.588052	54514.0	54354.0

	Conecuh County	2.684140	13208.0	12662.0
	Coosa County	-5.387581	11758.0	10724.0
	Covington County	-0.264121	38060.0	37796.0
	Crenshaw County	5.087600	13963.0	13853.0
	Cullman County	8.417777	82005.0	80374.0
	Dale County	-1.998668	50358.0	49501.0
	Dallas County	-14.711389	43803.0	41131.0
	DeKalb County	0.956790	71387.0	70869.0
	Elmore County	2.757093	81468.0	79465.0
	Escambia County	1.243830	38309.0	37784.0
	Etowah County	-1.588308	104442.0	103057.0
	Fayette County	-2.857058	17231.0	16759.0
	Franklin County	0.442422	31734.0	31507.0
...
Wisconsin	Washburn County	-4.995197	15930.0	15552.0
	Washington County	0.059931	133674.0	131967.0
	Waukesha County	0.593567	396488.0	390076.0
	Waupaca County	-0.173022	52422.0	51945.0
	Waushara County	-4.024395	24581.0	24033.0
	Winnebago County	-3.685304	169639.0	167059.0
	Wood County	-3.414223	74807.0	73435.0
Wyoming	Albany County	-5.166460	37956.0	36428.0
	Big Horn County	5.513554	12022.0	11672.0
	Campbell County	10.978525	49220.0	46244.0
	Carbon County	-22.600668	15856.0	15559.0
	Converse County	1.126443	14343.0	13728.0
	Crook County	19.309219	7444.0	7114.0
	Fremont County	-13.352750	41129.0	40222.0
	Goshen County	-10.635133	13666.0	13383.0
	Hot Springs County	-5.663940	4846.0	4741.0
	Johnson County	0.933652	8636.0	8552.0
	Laramie County	1.673640	97121.0	92271.0
	Lincoln County	1.662823	18722.0	17943.0
	Natrona County	0.793743	82178.0	75472.0
	Niobrara County	7.492114	2548.0	2475.0
	Park County	0.856839	29237.0	28259.0
	Platte County	4.207414	8812.0	8678.0
	Sheridan County	-2.198937	30020.0	29146.0
	Sublette County	-20.664059	10418.0	9899.0
	Sweetwater County	-14.070195	45162.0	43593.0
	Teton County	1.520747	23125.0	21297.0
	Uinta County	-12.606351	21102.0	20822.0
	Washakie County	1.441961	8545.0	8316.0
	Weston County	6.935294	7234.0	7065.0

[3142 rows x 100 columns]

In [14]: rows = ['POPESTIMATE2010',

```

        'POPESTIMATE2011',
        'POPESTIMATE2012',
        'POPESTIMATE2013',
        'POPESTIMATE2014',
        'POPESTIMATE2015']
df.apply(lambda x: np.max(x[rows]), axis=1).head()

```

```

Out[14]: STNAME    CTYNAME
Alabama  Autauga County    55347.0
         Baldwin County   203709.0
         Barbour County   27341.0
         Bibb County      22861.0
         Blount County    57776.0
dtype: float64

```

```

In [ ]:

```