Tugas\_Modul6

Torangto Situngkir

12/7/2020

1

library(dplyr)

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

library(dslabs)  
data("murders")

murders <- mutate(murders, rate = total/population \* 10^6 )  
murders

## state abb region population total rate  
## 1 Alabama AL South 4779736 135 28.244238  
## 2 Alaska AK West 710231 19 26.751860  
## 3 Arizona AZ West 6392017 232 36.295273  
## 4 Arkansas AR South 2915918 93 31.893901  
## 5 California CA West 37253956 1257 33.741383  
## 6 Colorado CO West 5029196 65 12.924531  
## 7 Connecticut CT Northeast 3574097 97 27.139722  
## 8 Delaware DE South 897934 38 42.319369  
## 9 District of Columbia DC South 601723 99 164.527532  
## 10 Florida FL South 19687653 669 33.980688  
## 11 Georgia GA South 9920000 376 37.903226  
## 12 Hawaii HI West 1360301 7 5.145920  
## 13 Idaho ID West 1567582 12 7.655102  
## 14 Illinois IL North Central 12830632 364 28.369608  
## 15 Indiana IN North Central 6483802 142 21.900730  
## 16 Iowa IA North Central 3046355 21 6.893484  
## 17 Kansas KS North Central 2853118 63 22.081106  
## 18 Kentucky KY South 4339367 116 26.732010  
## 19 Louisiana LA South 4533372 351 77.425810  
## 20 Maine ME Northeast 1328361 11 8.280881  
## 21 Maryland MD South 5773552 293 50.748655  
## 22 Massachusetts MA Northeast 6547629 118 18.021791  
## 23 Michigan MI North Central 9883640 413 41.786225  
## 24 Minnesota MN North Central 5303925 53 9.992600  
## 25 Mississippi MS South 2967297 120 40.440846  
## 26 Missouri MO North Central 5988927 321 53.598917  
## 27 Montana MT West 989415 12 12.128379  
## 28 Nebraska NE North Central 1826341 32 17.521372  
## 29 Nevada NV West 2700551 84 31.104763  
## 30 New Hampshire NH Northeast 1316470 5 3.798036  
## 31 New Jersey NJ Northeast 8791894 246 27.980319  
## 32 New Mexico NM West 2059179 67 32.537239  
## 33 New York NY Northeast 19378102 517 26.679599  
## 34 North Carolina NC South 9535483 286 29.993237  
## 35 North Dakota ND North Central 672591 4 5.947151  
## 36 Ohio OH North Central 11536504 310 26.871225  
## 37 Oklahoma OK South 3751351 111 29.589340  
## 38 Oregon OR West 3831074 36 9.396843  
## 39 Pennsylvania PA Northeast 12702379 457 35.977513  
## 40 Rhode Island RI Northeast 1052567 16 15.200933  
## 41 South Carolina SC South 4625364 207 44.753235  
## 42 South Dakota SD North Central 814180 8 9.825837  
## 43 Tennessee TN South 6346105 219 34.509357  
## 44 Texas TX South 25145561 805 32.013603  
## 45 Utah UT West 2763885 22 7.959810  
## 46 Vermont VT Northeast 625741 2 3.196211  
## 47 Virginia VA South 8001024 250 31.246001  
## 48 Washington WA West 6724540 93 13.829942  
## 49 West Virginia WV South 1852994 27 14.571013  
## 50 Wisconsin WI North Central 5686986 97 17.056487  
## 51 Wyoming WY West 563626 5 8.871131

x <-murders$rate  
murders <- mutate(murders,ranking = rank(x))  
murders

## state abb region population total rate ranking  
## 1 Alabama AL South 4779736 135 28.244238 29  
## 2 Alaska AK West 710231 19 26.751860 25  
## 3 Arizona AZ West 6392017 232 36.295273 42  
## 4 Arkansas AR South 2915918 93 31.893901 35  
## 5 California CA West 37253956 1257 33.741383 38  
## 6 Colorado CO West 5029196 65 12.924531 14  
## 7 Connecticut CT Northeast 3574097 97 27.139722 27  
## 8 Delaware DE South 897934 38 42.319369 46  
## 9 District of Columbia DC South 601723 99 164.527532 51  
## 10 Florida FL South 19687653 669 33.980688 39  
## 11 Georgia GA South 9920000 376 37.903226 43  
## 12 Hawaii HI West 1360301 7 5.145920 3  
## 13 Idaho ID West 1567582 12 7.655102 6  
## 14 Illinois IL North Central 12830632 364 28.369608 30  
## 15 Indiana IN North Central 6483802 142 21.900730 21  
## 16 Iowa IA North Central 3046355 21 6.893484 5  
## 17 Kansas KS North Central 2853118 63 22.081106 22  
## 18 Kentucky KY South 4339367 116 26.732010 24  
## 19 Louisiana LA South 4533372 351 77.425810 50  
## 20 Maine ME Northeast 1328361 11 8.280881 8  
## 21 Maryland MD South 5773552 293 50.748655 48  
## 22 Massachusetts MA Northeast 6547629 118 18.021791 20  
## 23 Michigan MI North Central 9883640 413 41.786225 45  
## 24 Minnesota MN North Central 5303925 53 9.992600 12  
## 25 Mississippi MS South 2967297 120 40.440846 44  
## 26 Missouri MO North Central 5988927 321 53.598917 49  
## 27 Montana MT West 989415 12 12.128379 13  
## 28 Nebraska NE North Central 1826341 32 17.521372 19  
## 29 Nevada NV West 2700551 84 31.104763 33  
## 30 New Hampshire NH Northeast 1316470 5 3.798036 2  
## 31 New Jersey NJ Northeast 8791894 246 27.980319 28  
## 32 New Mexico NM West 2059179 67 32.537239 37  
## 33 New York NY Northeast 19378102 517 26.679599 23  
## 34 North Carolina NC South 9535483 286 29.993237 32  
## 35 North Dakota ND North Central 672591 4 5.947151 4  
## 36 Ohio OH North Central 11536504 310 26.871225 26  
## 37 Oklahoma OK South 3751351 111 29.589340 31  
## 38 Oregon OR West 3831074 36 9.396843 10  
## 39 Pennsylvania PA Northeast 12702379 457 35.977513 41  
## 40 Rhode Island RI Northeast 1052567 16 15.200933 17  
## 41 South Carolina SC South 4625364 207 44.753235 47  
## 42 South Dakota SD North Central 814180 8 9.825837 11  
## 43 Tennessee TN South 6346105 219 34.509357 40  
## 44 Texas TX South 25145561 805 32.013603 36  
## 45 Utah UT West 2763885 22 7.959810 7  
## 46 Vermont VT Northeast 625741 2 3.196211 1  
## 47 Virginia VA South 8001024 250 31.246001 34  
## 48 Washington WA West 6724540 93 13.829942 15  
## 49 West Virginia WV South 1852994 27 14.571013 16  
## 50 Wisconsin WI North Central 5686986 97 17.056487 18  
## 51 Wyoming WY West 563626 5 8.871131 9

select(murders,state,abb)

## state abb  
## 1 Alabama AL  
## 2 Alaska AK  
## 3 Arizona AZ  
## 4 Arkansas AR  
## 5 California CA  
## 6 Colorado CO  
## 7 Connecticut CT  
## 8 Delaware DE  
## 9 District of Columbia DC  
## 10 Florida FL  
## 11 Georgia GA  
## 12 Hawaii HI  
## 13 Idaho ID  
## 14 Illinois IL  
## 15 Indiana IN  
## 16 Iowa IA  
## 17 Kansas KS  
## 18 Kentucky KY  
## 19 Louisiana LA  
## 20 Maine ME  
## 21 Maryland MD  
## 22 Massachusetts MA  
## 23 Michigan MI  
## 24 Minnesota MN  
## 25 Mississippi MS  
## 26 Missouri MO  
## 27 Montana MT  
## 28 Nebraska NE  
## 29 Nevada NV  
## 30 New Hampshire NH  
## 31 New Jersey NJ  
## 32 New Mexico NM  
## 33 New York NY  
## 34 North Carolina NC  
## 35 North Dakota ND  
## 36 Ohio OH  
## 37 Oklahoma OK  
## 38 Oregon OR  
## 39 Pennsylvania PA  
## 40 Rhode Island RI  
## 41 South Carolina SC  
## 42 South Dakota SD  
## 43 Tennessee TN  
## 44 Texas TX  
## 45 Utah UT  
## 46 Vermont VT  
## 47 Virginia VA  
## 48 Washington WA  
## 49 West Virginia WV  
## 50 Wisconsin WI  
## 51 Wyoming WY

murders %>% filter( ranking > 46 & ranking <=51) %>% select(state)

## state  
## 1 District of Columbia  
## 2 Louisiana  
## 3 Maryland  
## 4 Missouri  
## 5 South Carolina

murders %>% filter(region == "Northeast" | region == "West",rate < 1) %>% select(state,rate,ranking)

## [1] state rate ranking  
## <0 rows> (or 0-length row.names)

data("murders")  
 my\_states <- murders %>%  
 mutate(rate = total/population \* 10^5, ranking = rank(rate)) %>%  
 filter(region == "Northeast" | region == "West", rate < 1) %>%  
 select(state,rate,ranking)  
 my\_states

## state rate ranking  
## 1 Hawaii 0.5145920 3  
## 2 Idaho 0.7655102 6  
## 3 Maine 0.8280881 8  
## 4 New Hampshire 0.3798036 2  
## 5 Oregon 0.9396843 10  
## 6 Utah 0.7959810 7  
## 7 Vermont 0.3196211 1  
## 8 Wyoming 0.8871131 9