Modul6-Tugas

Khalil

12/5/2020

1.)

library(dslabs)  
 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

data("murders")  
 murders <- mutate(murders, rate = total/population \* 10^5 )  
 murders

## state abb region population total rate  
## 1 Alabama AL South 4779736 135 2.8244238  
## 2 Alaska AK West 710231 19 2.6751860  
## 3 Arizona AZ West 6392017 232 3.6295273  
## 4 Arkansas AR South 2915918 93 3.1893901  
## 5 California CA West 37253956 1257 3.3741383  
## 6 Colorado CO West 5029196 65 1.2924531  
## 7 Connecticut CT Northeast 3574097 97 2.7139722  
## 8 Delaware DE South 897934 38 4.2319369  
## 9 District of Columbia DC South 601723 99 16.4527532  
## 10 Florida FL South 19687653 669 3.3980688  
## 11 Georgia GA South 9920000 376 3.7903226  
## 12 Hawaii HI West 1360301 7 0.5145920  
## 13 Idaho ID West 1567582 12 0.7655102  
## 14 Illinois IL North Central 12830632 364 2.8369608  
## 15 Indiana IN North Central 6483802 142 2.1900730  
## 16 Iowa IA North Central 3046355 21 0.6893484  
## 17 Kansas KS North Central 2853118 63 2.2081106  
## 18 Kentucky KY South 4339367 116 2.6732010  
## 19 Louisiana LA South 4533372 351 7.7425810  
## 20 Maine ME Northeast 1328361 11 0.8280881  
## 21 Maryland MD South 5773552 293 5.0748655  
## 22 Massachusetts MA Northeast 6547629 118 1.8021791  
## 23 Michigan MI North Central 9883640 413 4.1786225  
## 24 Minnesota MN North Central 5303925 53 0.9992600  
## 25 Mississippi MS South 2967297 120 4.0440846  
## 26 Missouri MO North Central 5988927 321 5.3598917  
## 27 Montana MT West 989415 12 1.2128379  
## 28 Nebraska NE North Central 1826341 32 1.7521372  
## 29 Nevada NV West 2700551 84 3.1104763  
## 30 New Hampshire NH Northeast 1316470 5 0.3798036  
## 31 New Jersey NJ Northeast 8791894 246 2.7980319  
## 32 New Mexico NM West 2059179 67 3.2537239  
## 33 New York NY Northeast 19378102 517 2.6679599  
## 34 North Carolina NC South 9535483 286 2.9993237  
## 35 North Dakota ND North Central 672591 4 0.5947151  
## 36 Ohio OH North Central 11536504 310 2.6871225  
## 37 Oklahoma OK South 3751351 111 2.9589340  
## 38 Oregon OR West 3831074 36 0.9396843  
## 39 Pennsylvania PA Northeast 12702379 457 3.5977513  
## 40 Rhode Island RI Northeast 1052567 16 1.5200933  
## 41 South Carolina SC South 4625364 207 4.4753235  
## 42 South Dakota SD North Central 814180 8 0.9825837  
## 43 Tennessee TN South 6346105 219 3.4509357  
## 44 Texas TX South 25145561 805 3.2013603  
## 45 Utah UT West 2763885 22 0.7959810  
## 46 Vermont VT Northeast 625741 2 0.3196211  
## 47 Virginia VA South 8001024 250 3.1246001  
## 48 Washington WA West 6724540 93 1.3829942  
## 49 West Virginia WV South 1852994 27 1.4571013  
## 50 Wisconsin WI North Central 5686986 97 1.7056487  
## 51 Wyoming WY West 563626 5 0.8871131

2.)

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

## state abb region population total rate ranking  
## 1 Alabama AL South 4779736 135 2.8244238 29  
## 2 Alaska AK West 710231 19 2.6751860 25  
## 3 Arizona AZ West 6392017 232 3.6295273 42  
## 4 Arkansas AR South 2915918 93 3.1893901 35  
## 5 California CA West 37253956 1257 3.3741383 38  
## 6 Colorado CO West 5029196 65 1.2924531 14  
## 7 Connecticut CT Northeast 3574097 97 2.7139722 27  
## 8 Delaware DE South 897934 38 4.2319369 46  
## 9 District of Columbia DC South 601723 99 16.4527532 51  
## 10 Florida FL South 19687653 669 3.3980688 39  
## 11 Georgia GA South 9920000 376 3.7903226 43  
## 12 Hawaii HI West 1360301 7 0.5145920 3  
## 13 Idaho ID West 1567582 12 0.7655102 6  
## 14 Illinois IL North Central 12830632 364 2.8369608 30  
## 15 Indiana IN North Central 6483802 142 2.1900730 21  
## 16 Iowa IA North Central 3046355 21 0.6893484 5  
## 17 Kansas KS North Central 2853118 63 2.2081106 22  
## 18 Kentucky KY South 4339367 116 2.6732010 24  
## 19 Louisiana LA South 4533372 351 7.7425810 50  
## 20 Maine ME Northeast 1328361 11 0.8280881 8  
## 21 Maryland MD South 5773552 293 5.0748655 48  
## 22 Massachusetts MA Northeast 6547629 118 1.8021791 20  
## 23 Michigan MI North Central 9883640 413 4.1786225 45  
## 24 Minnesota MN North Central 5303925 53 0.9992600 12  
## 25 Mississippi MS South 2967297 120 4.0440846 44  
## 26 Missouri MO North Central 5988927 321 5.3598917 49  
## 27 Montana MT West 989415 12 1.2128379 13  
## 28 Nebraska NE North Central 1826341 32 1.7521372 19  
## 29 Nevada NV West 2700551 84 3.1104763 33  
## 30 New Hampshire NH Northeast 1316470 5 0.3798036 2  
## 31 New Jersey NJ Northeast 8791894 246 2.7980319 28  
## 32 New Mexico NM West 2059179 67 3.2537239 37  
## 33 New York NY Northeast 19378102 517 2.6679599 23  
## 34 North Carolina NC South 9535483 286 2.9993237 32  
## 35 North Dakota ND North Central 672591 4 0.5947151 4  
## 36 Ohio OH North Central 11536504 310 2.6871225 26  
## 37 Oklahoma OK South 3751351 111 2.9589340 31  
## 38 Oregon OR West 3831074 36 0.9396843 10  
## 39 Pennsylvania PA Northeast 12702379 457 3.5977513 41  
## 40 Rhode Island RI Northeast 1052567 16 1.5200933 17  
## 41 South Carolina SC South 4625364 207 4.4753235 47  
## 42 South Dakota SD North Central 814180 8 0.9825837 11  
## 43 Tennessee TN South 6346105 219 3.4509357 40  
## 44 Texas TX South 25145561 805 3.2013603 36  
## 45 Utah UT West 2763885 22 0.7959810 7  
## 46 Vermont VT Northeast 625741 2 0.3196211 1  
## 47 Virginia VA South 8001024 250 3.1246001 34  
## 48 Washington WA West 6724540 93 1.3829942 15  
## 49 West Virginia WV South 1852994 27 1.4571013 16  
## 50 Wisconsin WI North Central 5686986 97 1.7056487 18  
## 51 Wyoming WY West 563626 5 0.8871131 9

3.)

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

4.)

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

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

5.)

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

## state rate ranking  
## 1 Alabama 2.8244238 29  
## 2 Alaska 2.6751860 25  
## 3 Arizona 3.6295273 42  
## 4 Arkansas 3.1893901 35  
## 5 California 3.3741383 38  
## 6 Colorado 1.2924531 14  
## 7 Connecticut 2.7139722 27  
## 8 Delaware 4.2319369 46  
## 9 District of Columbia 16.4527532 51  
## 10 Florida 3.3980688 39  
## 11 Georgia 3.7903226 43  
## 12 Hawaii 0.5145920 3  
## 13 Idaho 0.7655102 6  
## 14 Illinois 2.8369608 30  
## 15 Indiana 2.1900730 21  
## 16 Iowa 0.6893484 5  
## 17 Kansas 2.2081106 22  
## 18 Kentucky 2.6732010 24  
## 19 Louisiana 7.7425810 50  
## 20 Maine 0.8280881 8  
## 21 Maryland 5.0748655 48  
## 22 Massachusetts 1.8021791 20  
## 23 Michigan 4.1786225 45  
## 24 Minnesota 0.9992600 12  
## 25 Mississippi 4.0440846 44  
## 26 Missouri 5.3598917 49  
## 27 Montana 1.2128379 13  
## 28 Nebraska 1.7521372 19  
## 29 Nevada 3.1104763 33  
## 30 New Hampshire 0.3798036 2  
## 31 New Jersey 2.7980319 28  
## 32 New Mexico 3.2537239 37  
## 33 New York 2.6679599 23  
## 34 North Carolina 2.9993237 32  
## 35 North Dakota 0.5947151 4  
## 36 Ohio 2.6871225 26  
## 37 Oklahoma 2.9589340 31  
## 38 Oregon 0.9396843 10  
## 39 Pennsylvania 3.5977513 41  
## 40 Rhode Island 1.5200933 17  
## 41 South Carolina 4.4753235 47  
## 42 South Dakota 0.9825837 11  
## 43 Tennessee 3.4509357 40  
## 44 Texas 3.2013603 36  
## 45 Utah 0.7959810 7  
## 46 Vermont 0.3196211 1  
## 47 Virginia 3.1246001 34  
## 48 Washington 1.3829942 15  
## 49 West Virginia 1.4571013 16  
## 50 Wisconsin 1.7056487 18  
## 51 Wyoming 0.8871131 9

OPERATOR PIPE 1.)

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

## 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