Tugas Modul 6

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03/12/2020

# import library and get data set  
library(dplyr)

library(dslabs)  
data(murders)

# Manipulasi Data Frame

## Nomor 1

murders <- mutate(murders, rate = total / population \* 100000)  
head(murders)

## state abb region population total rate  
## 1 Alabama AL South 4779736 135 2.824424  
## 2 Alaska AK West 710231 19 2.675186  
## 3 Arizona AZ West 6392017 232 3.629527  
## 4 Arkansas AR South 2915918 93 3.189390  
## 5 California CA West 37253956 1257 3.374138  
## 6 Colorado CO West 5029196 65 1.292453

## Nomor 2

murders <- mutate(murders, rank = rank(desc(murders$rate)))  
head(murders)

## state abb region population total rate rank  
## 1 Alabama AL South 4779736 135 2.824424 23  
## 2 Alaska AK West 710231 19 2.675186 27  
## 3 Arizona AZ West 6392017 232 3.629527 10  
## 4 Arkansas AR South 2915918 93 3.189390 17  
## 5 California CA West 37253956 1257 3.374138 14  
## 6 Colorado CO West 5029196 65 1.292453 38

## Nomor 3

select(murders, state, abb) %>% head()

## state abb  
## 1 Alabama AL  
## 2 Alaska AK  
## 3 Arizona AZ  
## 4 Arkansas AR  
## 5 California CA  
## 6 Colorado CO

## Nomor 4

filter(murders, rank <= 5)

## state abb region population total rate rank  
## 1 District of Columbia DC South 601723 99 16.452753 1  
## 2 Louisiana LA South 4533372 351 7.742581 2  
## 3 Maryland MD South 5773552 293 5.074866 4  
## 4 Missouri MO North Central 5988927 321 5.359892 3  
## 5 South Carolina SC South 4625364 207 4.475323 5

## Nomor 5

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

## state rate rank  
## 1 Hawaii 0.5145920 49  
## 2 Idaho 0.7655102 46  
## 3 Maine 0.8280881 44  
## 4 New Hampshire 0.3798036 50  
## 5 Oregon 0.9396843 42  
## 6 Utah 0.7959810 45  
## 7 Vermont 0.3196211 51  
## 8 Wyoming 0.8871131 43

# Operator Pipe

## Nomor 1

data(murders)  
my\_states <- murders %>%  
 mutate(rate = total / population \* 100000) %>%  
 filter(region == "Northeast" | region == "East" | region == "West", rate < 1) %>%  
 select(state, region, rate)  
my\_states

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