Tugas Modul 7

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1. Menggunakan as_tibble untuk mengkonversi tabel dataset "US murders" dalam bentuk tibble dan menyimpannya dalam objek baru bernama 'murders_tibble'

```
library(dslabs)
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --
```

```
## v ggplot2 3.3.5     v purrr   0.3.4
## v tibble  3.1.4     v dplyr   1.0.7
## v tidyr   1.1.4     v stringr 1.4.0
## v readr   2.0.2     v forcats 0.5.1
```

```
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
data(murders)
as_tibble(murders) %>% class()
```

```
## [1] "tbl_df"      "tbl"         "data.frame"
```

```
murders_tibble <- as_tibble(murders) %>% class()
```

2. Menggunakan fungsi group_by untuk mengkonversi dataset "US murders" menjadi sebuah tibble yang dikelompokkan berdasarkan 'region'

```
as_tibble(murders) %>% group_by(region)
```

```
## # A tibble: 51 x 5
## # Groups:    region [4]
##    state                abb   region     population total
##    <chr>                <chr> <fct>           <dbl> <dbl>
##  1 Alabama              AL    South         4779736   135
##  2 Alaska               AK    West           710231    19
##  3 Arizona              AZ    West          6392017   232
##  4 Arkansas             AR    South         2915918    93
##  5 California           CA    West         37253956  1257
##  6 Colorado             CO    West          5029196    65
##  7 Connecticut          CT    Northeast     3574097    97
##  8 Delaware             DE    South          897934    38
##  9 District of Columbia DC    South          601723    99
## 10 Florida              FL    South        19687653   669
## # ... with 41 more rows
```

3. Menggunakan operator pipe dan dot operator

```r
library(dslabs)
library(dplyr)
data(murders)
murders %>%
    pull(population) %>%
    log %>%
    mean %>%
    exp
```

```
## [1] 3675209
```

4.

```r
library(purrr)
compute_s_n <- function(n){
 x <- 1:n
 sum(x)
}
n <- 1:100
s_n <- sapply(n, compute_s_n)
compute_s_n <- function(n){
 x <- 1:n
 tibble(sum = sum(x))
}
s_n <- map_df(n, compute_s_n)
as_tibble(s_n)
```

```
## # A tibble: 100 x 1
##      sum
##    <int>
## 1      1
## 2      3
## 3      6
## 4     10
## 5     15
## 6     21
## 7     28
## 8     36
## 9     45
## 10    55
## # ... with 90 more rows
```