TugasModul3

Iadhty

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```
library(dslabs)
data(murders)
```

1. Fungsi str

a. Data murders memiliki 51 data di dalamnya

```
length(murders$state)
```

```
## [1] 51
```

b. Data berisi tingkat pembunuhan pada 50 negara bagian dan DC

```
murders
```

```
##                  state abb        region population total
## 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
## 11             Georgia  GA         South    9920000   376
## 12              Hawaii  HI          West    1360301     7
## 13               Idaho  ID          West    1567582    12
## 14            Illinois  IL North Central   12830632   364
## 15             Indiana  IN North Central    6483802   142
## 16                Iowa  IA North Central    3046355    21
## 17              Kansas  KS North Central    2853118    63
## 18            Kentucky  KY         South    4339367   116
## 19           Louisiana  LA         South    4533372   351
## 20               Maine  ME     Northeast    1328361    11
## 21            Maryland  MD         South    5773552   293
## 22       Massachusetts  MA     Northeast    6547629   118
## 23            Michigan  MI North Central    9883640   413
## 24           Minnesota  MN North Central    5303925    53
## 25         Mississippi  MS         South    2967297   120
## 26            Missouri  MO North Central    5988927   321
## 27             Montana  MT          West     989415    12
## 28            Nebraska  NE North Central    1826341    32
## 29              Nevada  NV          West    2700551    84
## 30       New Hampshire  NH     Northeast    1316470     5
## 31          New Jersey  NJ     Northeast    8791894   246
## 32          New Mexico  NM          West    2059179    67
## 33            New York  NY     Northeast   19378102   517
## 34      North Carolina  NC         South    9535483   286
## 35        North Dakota  ND North Central     672591     4
## 36                Ohio  OH North Central   11536504   310
## 37            Oklahoma  OK         South    3751351   111
## 38              Oregon  OR          West    3831074    36
## 39        Pennsylvania  PA     Northeast   12702379   457
## 40        Rhode Island  RI     Northeast    1052567    16
## 41      South Carolina  SC         South    4625364   207
## 42        South Dakota  SD North Central     814180     8
## 43           Tennessee  TN         South    6346105   219
## 44               Texas  TX         South   25145561   805
## 45                Utah  UT          West    2763885    22
## 46             Vermont  VT     Northeast     625741     2
## 47            Virginia  VA         South    8001024   250
## 48          Washington  WA          West    6724540    93
## 49       West Virginia  WV         South    1852994    27
## 50           Wisconsin  WI North Central    5686986    97
## 51             Wyoming  WY          West     563626     5
```

c. Data berisi Nama negara bagian, singkatan dari nama negara bagian, wilayah negara bagian, dan populasi negara bagian serta jumlah total pembunuhan pada tahun 2010.

```
str(murders)
```

```
## 'data.frame':    51 obs. of  5 variables:
##  $ state     : chr  "Alabama" "Alaska" "Arizona" "Arkansas" ...
##  $ abb       : chr  "AL" "AK" "AZ" "AR" ...
##  $ region    : Factor w/ 4 levels "Northeast","South",..: 2 4 4 2 4 4 1 2 2 2 ...
##  $ population: num  4779736 710231 6392017 2915918 37253956 ...
##  $ total     : num  135 19 232 93 1257 ...
```

d. “str” tidak menunjukkan informasi yang relevan, namun menunjukkan struktur dati suatu data

```
str(murders)
```

```
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##  $ state     : chr  "Alabama" "Alaska" "Arizona" "Arkansas" ...
##  $ abb       : chr  "AL" "AK" "AZ" "AR" ...
##  $ region    : Factor w/ 4 levels "Northeast","South",..: 2 4 4 2 4 4 1 2 2 2 ...
##  $ population: num  4779736 710231 6392017 2915918 37253956 ...
##  $ total     : num  135 19 232 93 1257 ...
```

2. Nama kolom pada data frame adalah `state`, `abb`, `region`, `population`, dan `total`

```
str(murders)
```

```
## 'data.frame':    51 obs. of  5 variables:
##  $ state     : chr  "Alabama" "Alaska" "Arizona" "Arkansas" ...
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##  $ region    : Factor w/ 4 levels "Northeast","South",..: 2 4 4 2 4 4 1 2 2 2 ...
##  $ population: num  4779736 710231 6392017 2915918 37253956 ...
##  $ total     : num  135 19 232 93 1257 ...
```

3. Jenis class objek “a” adalah “character”

```
a = murders$abb
class(a)
```

```
## [1] "character"
```

4. Jenis class objek “b” dan “a” adalah “character”

```
b <- murders$abb
class(b)
```

```
## [1] "character"
```

5. Jumlah region yang dimiliki dataset

```
length(levels(murders$region))
```

```
## [1] 4
```

6. Jumlah state pada setiap region

```
table(murders$region)
```

```
##
##     Northeast         South North Central          West
##             9            17            12            13
```