Latihan3_123190149

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1. Mengurutkan data populasi dan menampilkan data terkecil dari populasi

```
library(dslabs)
data(murders)
pop <- (murders$population)
sort(pop)
```

```
##  [1]   563626   601723   625741   672591   710231   814180   897934   989415
##  [9]  1052567  1316470  1328361  1360301  1567582  1826341  1852994  2059179
## [17]  2700551  2763885  2853118  2915918  2967297  3046355  3574097  3751351
## [25]  3831074  4339367  4533372  4625364  4779736  5029196  5303925  5686986
## [33]  5773552  5988927  6346105  6392017  6483802  6547629  6724540  8001024
## [41]  8791894  9535483  9883640  9920000 11536504 12702379 12830632 19378102
## [49] 19687653 25145561 37253956
```

```
min(murders[["population"]])
```

```
## [1] 563626
```

2. Menampilkan indeks data terkecil dari populasi

```
x <- (min(murders$population))
order(x)
```

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

3. Menggunakan fungsi which.min untuk menampilkan indeks data terkecil dari populasi

```
i_min <- which.min(murders$population)
i_min
```

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

4. Menmapilkan nama negara yang memiliki populasi terkecil

```
i_min <- which.min(murders$population)
murders$state[i_min]
```

```
## [1] "Wyoming"
```

5. Menggunakan fungsi rank untuk menentukan peringkat populasi dan menyimpannya pada objek “ranks”

```
ranks <- (murders$population)
rank(ranks)
```

```
##  [1] 29  5 36 20 51 30 23  7  2 49 44 12 13 47 37 22 19 26 27 11 33 38 43 31 21
## [26] 34  8 14 17 10 41 16 48 42  4 45 24 25 46  9 28  6 35 50 18  3 40 39 15 32
## [51]  1
```

lalu membuat data frame baru “my_df” yang berisi nama negara dan peringkat populasinya

```
rank <- (rank(ranks))
state <- (murders$state)
my_df <- data.frame(negara = state, peringkat = rank)
```

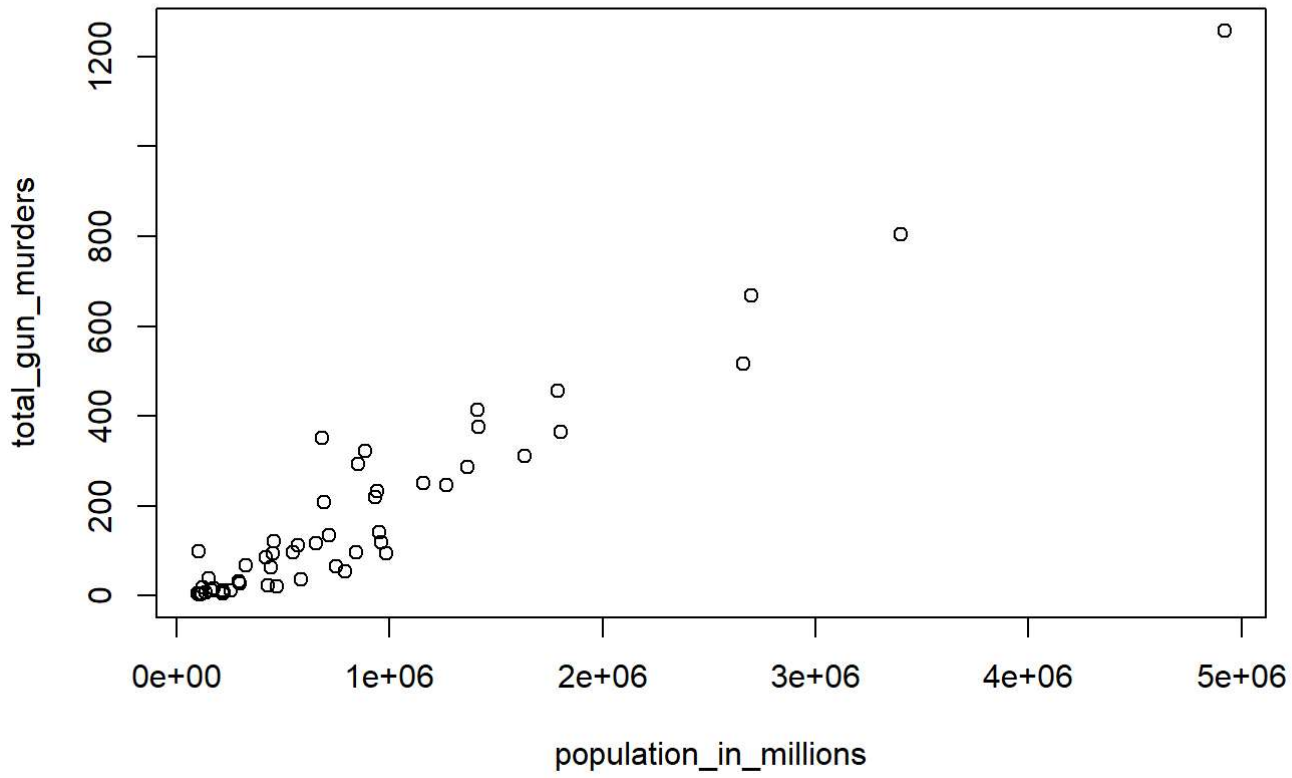
6. Membuat objek “ind” untuk mengurutkan my_df dengan menggunakan fungsi order

```
ind <- order(my_df$peringkat)
my_df$negara[ind]
```

```
##  [1] "Wyoming"              "District of Columbia" "Vermont"
##  [4] "North Dakota"         "Alaska"               "South Dakota"
##  [7] "Delaware"             "Montana"              "Rhode Island"
## [10] "New Hampshire"        "Maine"                "Hawaii"
## [13] "Idaho"                "Nebraska"             "West Virginia"
## [16] "New Mexico"           "Nevada"               "Utah"
## [19] "Kansas"               "Arkansas"             "Mississippi"
## [22] "Iowa"                 "Connecticut"          "Oklahoma"
## [25] "Oregon"               "Kentucky"             "Louisiana"
## [28] "South Carolina"       "Alabama"              "Colorado"
## [31] "Minnesota"            "Wisconsin"            "Maryland"
## [34] "Missouri"             "Tennessee"            "Arizona"
## [37] "Indiana"              "Massachusetts"        "Washington"
## [40] "Virginia"             "New Jersey"           "North Carolina"
## [43] "Michigan"             "Georgia"              "Ohio"
## [46] "Pennsylvania"         "Illinois"             "New York"
## [49] "Florida"              "Texas"                "California"
```

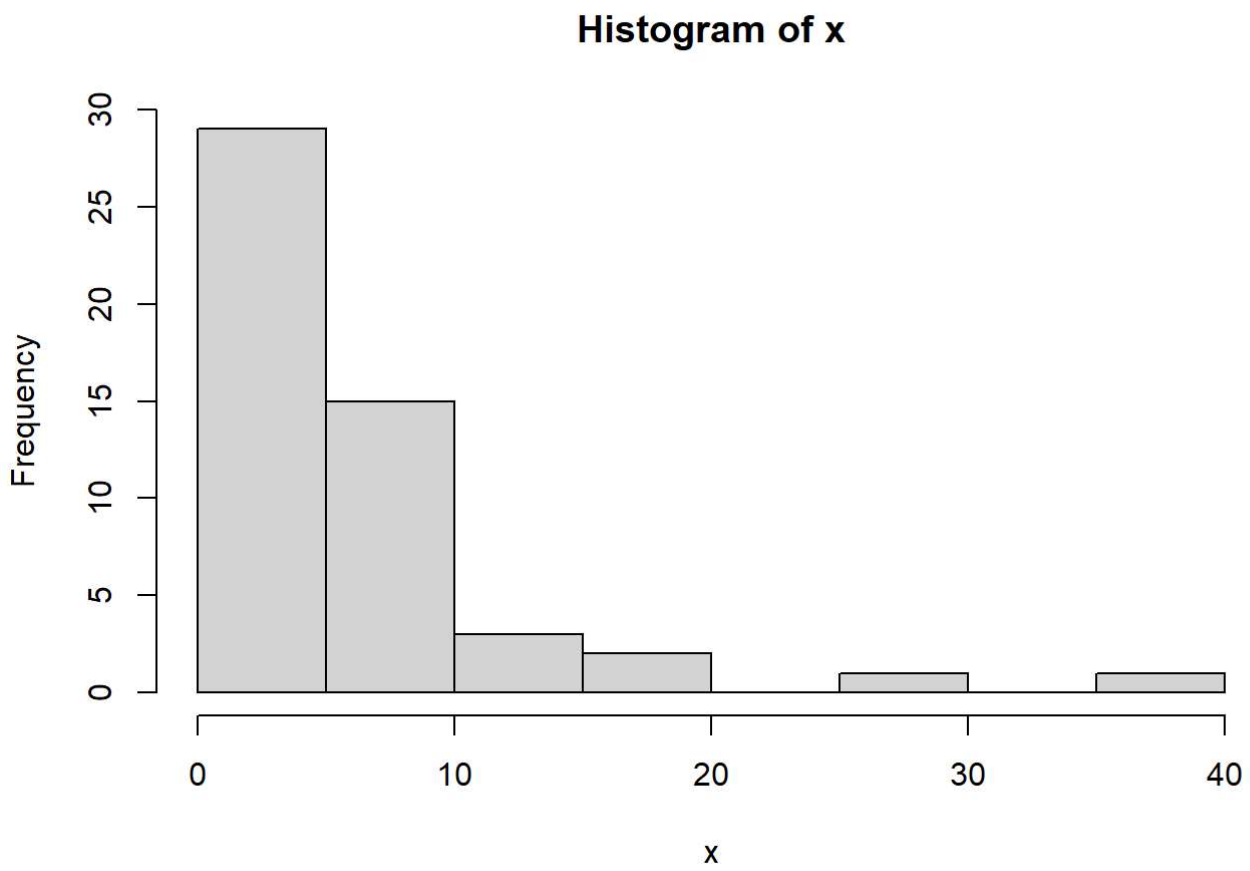
7. Membuat plot dalam skala log10

```
population_in_millions <- murders$population/log10(murders$population)
total_gun_murders <- murders$total
plot(population_in_millions, total_gun_murders )
```



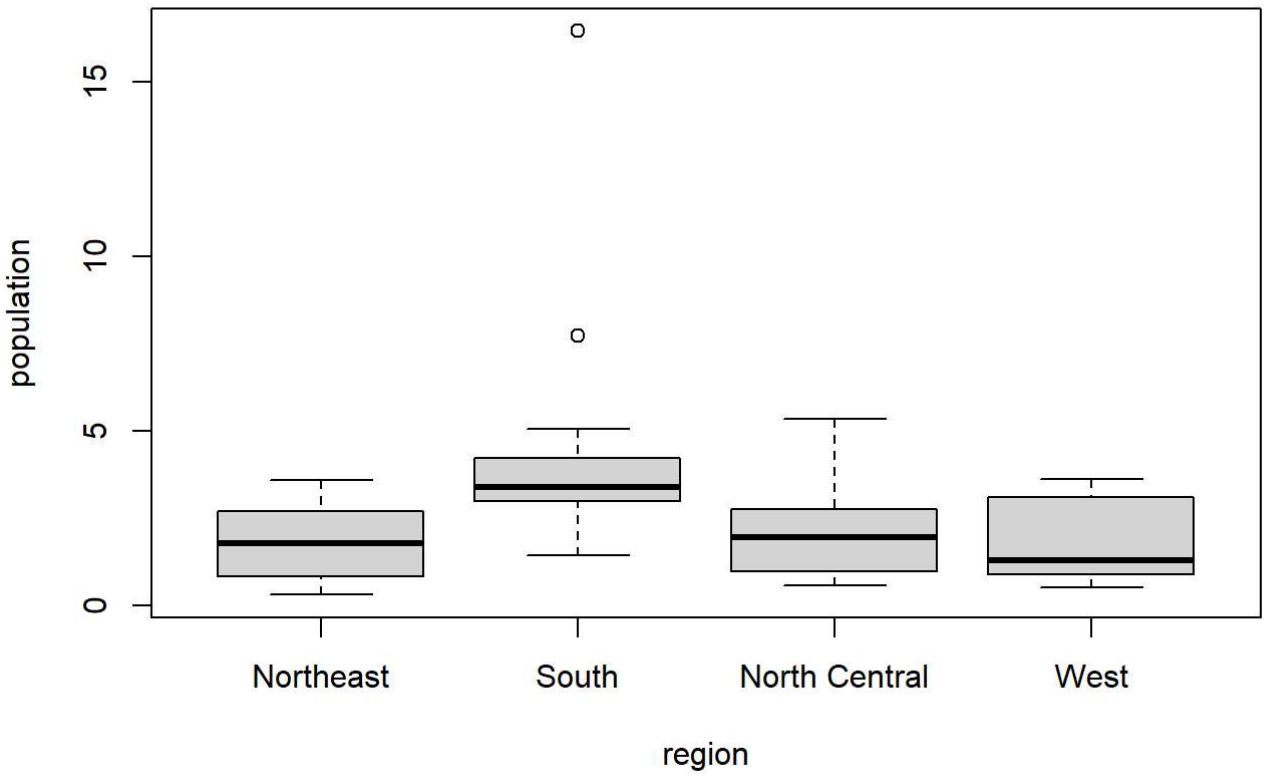
8. Membuat histogram dari populasi negara bagian

```
x <- (murders$population/10^6)
hist(x)
```



9. Menghasilkan boxplot dari populasi negara berdasarkan wilayahnya

```
murders$population <- with(murders, total / population * 100000)
boxplot(population~region, data = murders)
```


population
0
5
10
15
Northeast
South
North Central
West
region