

Tugas_Modul4

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10/10/2020

1

```
library(dslabs)
data(murders)
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
## $ population: num  4779736 710231 6392017 2915918 37253956 ...
## $ total      : num   135  19  232  93 1257 ...

pop <- murders$population
sort(pop)[[1]]

## [1] 563626
```

2

```
order(pop)[[1]]

## [1] 51
```

3

```
which.min(pop) == order(pop)[[1]]

## [1] TRUE
```

4

```
murders$state[[order(pop)[[1]]]]

## [1] "Wyoming"
```

5

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

##           name peringkat
## 1      Alabama        29
```

## 2	Alaska	5
## 3	Arizona	36
## 4	Arkansas	20
## 5	California	51
## 6	Colorado	30
## 7	Connecticut	23
## 8	Delaware	7
## 9	District of Columbia	2
## 10	Florida	49
## 11	Georgia	44
## 12	Hawaii	12
## 13	Idaho	13
## 14	Illinois	47
## 15	Indiana	37
## 16	Iowa	22
## 17	Kansas	19
## 18	Kentucky	26
## 19	Louisiana	27
## 20	Maine	11
## 21	Maryland	33
## 22	Massachusetts	38
## 23	Michigan	43
## 24	Minnesota	31
## 25	Mississippi	21
## 26	Missouri	34
## 27	Montana	8
## 28	Nebraska	14
## 29	Nevada	17
## 30	New Hampshire	10
## 31	New Jersey	41
## 32	New Mexico	16
## 33	New York	48
## 34	North Carolina	42
## 35	North Dakota	4
## 36	Ohio	45
## 37	Oklahoma	24
## 38	Oregon	25
## 39	Pennsylvania	46
## 40	Rhode Island	9
## 41	South Carolina	28
## 42	South Dakota	6
## 43	Tennessee	35
## 44	Texas	50
## 45	Utah	18
## 46	Vermont	3
## 47	Virginia	40
## 48	Washington	39
## 49	West Virginia	15
## 50	Wisconsin	32
## 51	Wyoming	1

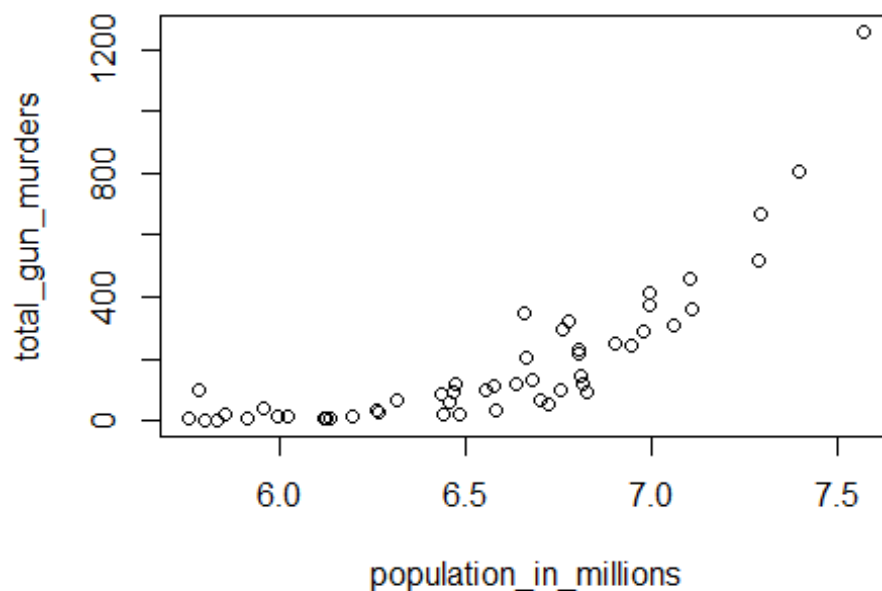
```
ind = order(my_df$peringkat)
my_dff = data.frame(name=(sort(murders$state))[ind],Populasi =
sort(murders$population),Peringkat = sort(ranks))
my_dff
```

##		name	Populasi	Peringkat
## 1		Wyoming	563626	1
## 2		District of Columbia	601723	2
## 3		Vermont	625741	3
## 4		North Dakota	672591	4
## 5		Alaska	710231	5
## 6		South Dakota	814180	6
## 7		Delaware	897934	7
## 8		Montana	989415	8
## 9		Rhode Island	1052567	9
## 10		New Hampshire	1316470	10
## 11		Maine	1328361	11
## 12		Hawaii	1360301	12
## 13		Idaho	1567582	13
## 14		Nebraska	1826341	14
## 15		West Virginia	1852994	15
## 16		New Mexico	2059179	16
## 17		Nevada	2700551	17
## 18		Utah	2763885	18
## 19		Kansas	2853118	19
## 20		Arkansas	2915918	20
## 21		Mississippi	2967297	21
## 22		Iowa	3046355	22
## 23		Connecticut	3574097	23
## 24		Oklahoma	3751351	24
## 25		Oregon	3831074	25
## 26		Kentucky	4339367	26
## 27		Louisiana	4533372	27
## 28		South Carolina	4625364	28
## 29		Alabama	4779736	29
## 30		Colorado	5029196	30
## 31		Minnesota	5303925	31
## 32		Wisconsin	5686986	32
## 33		Maryland	5773552	33
## 34		Missouri	5988927	34
## 35		Tennessee	6346105	35
## 36		Arizona	6392017	36
## 37		Indiana	6483802	37
## 38		Massachusetts	6547629	38
## 39		Washington	6724540	39
## 40		Virginia	8001024	40
## 41		New Jersey	8791894	41
## 42		North Carolina	9535483	42

```
## 43      Michigan 9883640      43
## 44      Georgia 9920000      44
## 45      Ohio 11536504      45
## 46    Pennsylvania 12702379      46
## 47      Illinois 12830632      47
## 48      New York 19378102      48
## 49      Florida 19687653      49
## 50      Texas 25145561      50
## 51    California 37253956      51
```

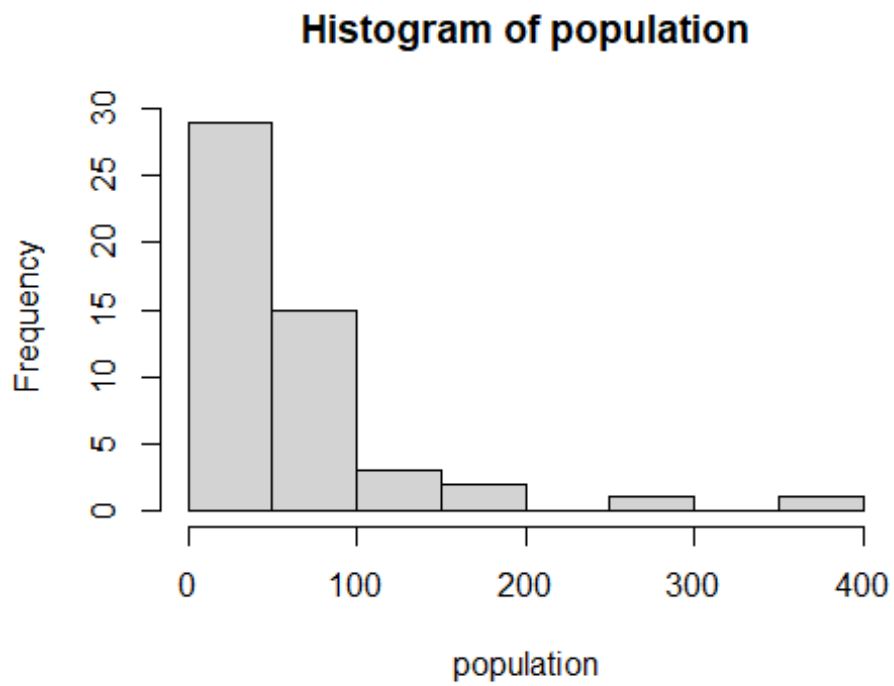
7

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



8

```
population <- murders$population/100000
hist(population)
```



9

```
popstate=murders$population/10^5  
boxplot(popstate~region,data=murders)
```

