tugas_modul_5

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Modul 3

meload library yang dibutuhkan

```
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 2 2 ...
##  $ population: num  4779736 710231 6392017 2915918 37253956 ...
##  $ total     : num  135 19 232 93 1257 ...
```

Nomor 1

```
new_names = ifelse(nchar(murders$state) < 8, murders$state, murders$abb)
new_names
```

```
##  [1] "Alabama" "Alaska"  "Arizona" "AR"      "CA"      "CO"      "CT"
##  [8] "DE"      "DC"      "Florida" "Georgia" "Hawaii"  "Idaho"   "IL"
## [15] "Indiana" "Iowa"    "Kansas"  "KY"      "LA"      "Maine"   "MD"
## [22] "MA"      "MI"      "MN"      "MS"      "MO"      "Montana" "NE"
## [29] "Nevada"  "NH"      "NJ"      "NM"      "NY"      "NC"      "ND"
## [36] "Ohio"    "OK"      "Oregon"  "PA"      "RI"      "SC"      "SD"
## [43] "TN"      "Texas"   "Utah"    "Vermont" "VA"      "WA"      "WV"
## [50] "WI"      "Wyoming"
```

Nomor 2

```
sum_n = function(n){
  j = 1:n
  print(sum(j))
}

sum_n(10)
```

```
## [1] 55
```

Nomor 3

```
compute_s_n = function(n){
  x = 1:n
  x = x^2
  print(sum(x))
}

compute_s_n(5)
```

```
## [1] 55
```

Nomor 4

```
s_n = vector("numeric",25)
for(n in 1:25){
  s_n[n] = compute_s_n(n)
}
```

```
## [1] 1
## [1] 5
## [1] 14
## [1] 30
## [1] 55
## [1] 91
## [1] 140
## [1] 204
## [1] 285
## [1] 385
## [1] 506
## [1] 650
## [1] 819
## [1] 1015
## [1] 1240
## [1] 1496
## [1] 1785
## [1] 2109
## [1] 2470
## [1] 2870
## [1] 3311
## [1] 3795
## [1] 4324
## [1] 4900
## [1] 5525
```

Nomor 5

```r
s_n <- sapply(1:25, compute_s_n)
```

```
## [1] 1
## [1] 5
## [1] 14
## [1] 30
## [1] 55
## [1] 91
## [1] 140
## [1] 204
## [1] 285
## [1] 385
## [1] 506
## [1] 650
## [1] 819
## [1] 1015
## [1] 1240
## [1] 1496
## [1] 1785
## [1] 2109
## [1] 2470
## [1] 2870
## [1] 3311
## [1] 3795
## [1] 4324
## [1] 4900
## [1] 5525
```

```r
s_n
```

```
##  [1]    1    5   14   30   55   91  140  204  285  385  506  650  819 1015 1240
## [16] 1496 1785 2109 2470 2870 3311 3795 4324 4900 5525
```