Tugas Modul 5

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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 ...

## Modul 5

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When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

## 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  
 j = j %% 2   
 print(sum(j))  
}  
sum\_n(5000)

## [1] 2500

## Nomor 3

compute\_s\_n = function(n){  
 x = 1:n  
 x = x^2  
 print(sum(x))  
}  
compute\_s\_n(10)

## [1] 385

## 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

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

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