Quiz-3.R

Benhard Leroy

2024-09-19

# Membuat Sintaks Fungsi  
nama\_fungsi <- function(argumen1, argumen2, ...) {  
 hasil <- argumen1 + argumen2  
 return(hasil)  
}  
  
#Membuat Fungsi  
my\_function <- function() {  
 print ("Hello Everyone")  
}  
  
#Membuat Call a function  
myfunction <- function() {  
 print ("Hello Everyone")  
}  
my\_function ()

## [1] "Hello Everyone"

#Membuat Arguments in Function  
my\_function <- function(fname) {  
 paste(fname, "George")  
   
}  
my\_function("Baston")

## [1] "Baston George"

my\_function("Ashley")

## [1] "Ashley George"

my\_function("Richard")

## [1] "Richard George"

#Membuat Number of Arguments in function  
my\_function <- function(fname, lname) {  
 paste(fname, lname)  
}  
  
my\_function("George","Baston")

## [1] "George Baston"

#Membuat default parameter value in function  
my\_function <- function(hobby = "Playing football") {  
 paste("My hobby is", hobby)  
}  
  
my\_function("drawing")

## [1] "My hobby is drawing"

my\_function("coding")

## [1] "My hobby is coding"

my\_function("playing basketball")

## [1] "My hobby is playing basketball"

my\_function()

## [1] "My hobby is Playing football"

#Membuat return value in function  
my\_function <- function(x) {  
 return(3 \* x)  
}  
  
print(my\_function(2))

## [1] 6

print(my\_function(5))

## [1] 15

print(my\_function(8))

## [1] 24

#Membuat nested in function  
Nested\_function <- function(x,y){  
 a <- x \* y  
 return (a)  
}  
Nested\_function(Nested\_function(1,3), Nested\_function(4,3))

## [1] 36

#Membuat nested in function part 2  
Outer\_func <- function(x) {  
 Inner\_func <- function(y) {  
 a <- x - y  
 return(a)  
 }  
 return(Inner\_func)  
}  
output <- Outer\_func(3)  
output(8)

## [1] -5

#Membuat recursion in function  
tri\_recursion <- function(d) {  
 if (d >5) {  
 result <- d + tri\_recursion(d + 1)  
 print(result)  
 } else {  
 result = 1  
 return(result)  
 }  
}  
tri\_recursion(5)

## [1] 1

#Membuat global variables in function  
  
txt <- "amazing"   
my\_function <- function() {  
 paste("Coding is", txt)  
}  
  
my\_function()

## [1] "Coding is amazing"

#Membuat global variables in function part 2  
txt <- "global variable"  
my\_function <- function() {  
 txt = "great"  
 paste("Coding is", txt)  
}  
  
my\_function()

## [1] "Coding is great"

print(txt)

## [1] "global variable"

#Membuat the global assignment operator in function  
  
my\_function <- function() {  
 txt <<- "interesting"  
 paste ("Coding is", txt)  
}  
  
my\_function()

## [1] "Coding is interesting"

print(txt)

## [1] "interesting"

#Membuat the global assignment operator in function part 2  
txt <- "fun"  
my\_function <- function() {  
 txt <<- "to be amaze"  
 paste("Prepare", txt)  
}  
  
my\_function()

## [1] "Prepare to be amaze"

paste("Prepare", txt)

## [1] "Prepare to be amaze"

#Membuat macam fungsi  
  
rata\_rata <- mean(c(7,12,14,18,20))  
print(rata\_rata)

## [1] 14.2

#Membuat built in function  
hitungRataRata <- function(angka) {  
 Rata\_rata <- mean(angka)  
 return(rata\_rata)  
}  
  
hitungRataRata(c(6,13,14,15))

## [1] 14.2

#Membuat custom function  
hitungluasPersegiPanjang <- function(panjang, lebar){  
 luas <- panjang \* lebar  
 return(luas)  
}  
  
hitungluasPersegiPanjang(6, 7)

## [1] 42

#Membuat custom function part 2  
  
sapaPengguna <- function(name = "Benhard"){  
 print(paste("Selamat datang,", name))  
}  
  
sapaPengguna()

## [1] "Selamat datang, Benhard"

sapaPengguna("Benhard")

## [1] "Selamat datang, Benhard"

#Memanggil pustaka dplyr  
library("dplyr")

##   
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':  
##   
## filter, lag

## The following objects are masked from 'package:base':  
##   
## intersect, setdiff, setequal, union

#Manipulasi data dengan My Test.R  
data <- data.frame(nama = c("A", "B", "C"), nilai = c(90, 75,95))  
# Filter data dengan nilai lebih dari 85  
data\_filtered <- data %>% filter(nilai > 85)  
print(data\_filtered)

## nama nilai  
## 1 A 90  
## 2 C 95

#Memanggil pustaka ggplot2  
library (ggplot2)  
  
#Data penghasilan karyawan  
data\_karyawan <- data.frame(  
 nama = c("A", "B", "C", "D", "E"),  
 penghasilan = c(15000, 10000, 20000, 6000, 9000)  
)   
  
#Membuat grafik batang  
ggplot(data\_karyawan, aes(x = nama, y = penghasilan)) +  
 geom\_bar(stat = "identity", fill = "blue") +  
 ggtitle("Penghasilan Bulan Karyawan")

