Rworksheet_Gregorio#3a

2023-10-10

#1 There is a built-in vector LETTERS contains the uppercase letters of the alphabet and letters which contains the lowercase letters of the alphabet.

UppercaseLetter <- LETTERS [1:26] UppercaseLetter

LowercaseLetter <- letters [1:26] LowercaseLetter

#a. You need to produce a vector that contains the first 11 letters. first_11_letters <- LETTERS[1:11] first_11_letters

#b. Produce a vector that contains the odd numbered letters. oddnumber <- LETTERS[c(TRUE, FALSE)] oddnumber

#c. Produce a vector that contains the vowels

vowels <- LETTERS[c(1, 5, 9, 15, 21)] vowels

#d. Produce a vector that contains the last 5 lowercase letters.

LowerCaseLetter <- letters [22:26] LowerCaseLetter

#e. Produce a vector that contains letters between 15 to 24 letters in lowercase.

LowerCaseLetter <- letters [c(15:24)] LowerCaseLetter

#2. Create a vector(not a dataframe) with the average temperatures in April for Tugue- garao City, Manila, Iloilo City, Tacloban, Samal Island, and Davao City. The average temperatures in Celcius are 42, 39, 34, 34, 30, and 27 degrees.

#2a. What is the R code and its result for creating a character vector for the city/town of Tuguegarao City, Manila, Iloilo City, Tacloban,Samal Island, and Davao City? Name the object as city. The names should follow the same order as in the instruction.

average_city <- c("Tuguegarao City", "Manila", "Iloilo City", "Tacloban", "Samal Island", "Davao City")

average_city

#Output "Tuguegarao City" "Manila" "Iloilo City" "Tacloban" "Samal Island" "Davao City

#2b. The average temperatures in Celcius are 42, 39, 34, 34, 30, and 27 degrees. Name the object as temp. Write the R code and its output. Numbers should also follow what is in the instruction.

average_temperatures <- c(42, 39, 34, 34, 30, 27) average_temperatures

#output "42" "39" "34" "34" "30" "27"

#2c. Create a dataframe to combine the city and the temp by using 'data.frame(). What the R code and its result?

#the result it shows the City and the Temperature Celcius

city_temp <- data.frame(City = city, Temperature = temp) city_temp_dataframe

#2d names(city_temp_dataframe) <- c("City", "Temperature") city_temp_dataframe

#2e

str(city_temp) # it displayed the output with 6 obs. of 2 variables and the class of it.

#2f row34 <- city_temp [3:4,] row34

#2g Hightemp <- city_temp[which.max(city_temp$Temperature),] Hightemp

lowtemp <- city_temp[which.min(city_temp$Temperature),] lowtemp

#3a ma_trix <- matrix(c(1:8, 11:14), nrow = 3) ma_trix

#3b ma_trix <- ma_trix * 2 ma_trix

#3c row_2 <- ma_trix[2,] row_2

#3d subset_ma_trix <- ma_trix[1:2, 3:4] subset_ma_trix

#3e row_3_subset <- ma_trix[3, 2:3] row_3_subset

#3f col_4 <- ma_trix[, 4] col_4

#3g rownames(ma_trix) <- c("isa", "dalawa", "tatlo") colnames(ma_trix) <- c("uno", "dos", "tres", "quatro") ma_trix

#3h ma_trix_reshaped <- matrix(mat, nrow = 6, ncol = 2) ma_trix_reshaped

#USING ARRAYS

#4 An array contains 1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1

#4a array_num <- array(c(1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1),c(2,4,3))

array_num

#4b dim(array_num)

#4c colnames(array_num) <- c("A","B","C","D")

array_num

w "'