statement\_question

2024-04-17

#1. Write a script that will print “Even Number” if the variable x is an even number, otherwise print “Not Even”:  
x <- 10  
  
if (x %% 2 == 0) {  
 print("Even Number")  
} else {  
 print("Not Even")  
}

## [1] "Even Number"

#2. Write a script that will print ‘Is a Matrix’ if the variable x is a matrix, otherwise print “Not a Matrix”:  
x <- matrix(1:4, nrow = 3)

## Warning in matrix(1:4, nrow = 3): data length [4] is not a sub-multiple or  
## multiple of the number of rows [3]

x

## [,1] [,2]  
## [1,] 1 4  
## [2,] 2 1  
## [3,] 3 2

if (is.matrix(x)) {  
 print("Is a Matrix")  
} else {  
 print("Not a Matrix")  
}

## [1] "Is a Matrix"

#3.Create a script that given a numeric vector x=c(3,7,1), will print out the elements in order from low to high i.e (1,3,7).   
# You must use if,else if, and else statements for your logic:  
x <- c(3, 7, 1)  
  
if (x[1] > x[2] && x[1] > x[3]) {  
 if (x[2] > x[3]) {  
 cat(x[3], x[2], x[1], sep = ", ")  
 } else {  
 cat(x[2], x[3], x[1], sep = ", ")  
 }  
} else if (x[2] > x[1] && x[2] > x[3]) {  
 if (x[1] > x[3]) {  
 cat(x[3], x[1], x[2], sep = ", ")  
 } else {  
 cat(x[1], x[3], x[2], sep = ", ")  
 }  
} else {  
 if (x[1] > x[2]) {  
 cat(x[2], x[1], x[3], sep = ", ")  
 } else {  
 cat(x[1], x[2], x[3], sep = ", ")  
 }  
}

## 1, 3, 7

# 4. Write a script that uses if, else if, and else statements to print the max element in a numeric vector with 3 elements.  
# Ex. x = c(3,7,1) 7 should be the output:  
x <- c(15, 17, 18)  
  
if (x[1] > x[2] && x[1] > x[3]) {  
 print(x[1])  
} else if (x[2] > x[1] && x[2] > x[3]) {  
 print(x[2])  
} else {  
 print(x[3])  
}

## [1] 18