**208W1A1299 R LAB TASK 3**

#1. Write R code to create a vector of a specified type and length. Create vector of numeric, complex,

#logical and character types of length 6.

vec\_int = c(2,4,6,8,1,9)

vec\_char = c('r','i','z','w','a','n')

vec\_logic = c(TRUE,FALSE,TRUE,FALSE,TRUE,FALSE)

vec\_complex = c(1+3i,2+2i,4-9i,2+4i,4+1i,5-9i)

class(vec\_complex)

class(vec\_int)

class(vec\_char)

class(vec\_logic)

# 2. Write R code to add two vectors of integer’s type and length 3

vec1 = c(2,4,5)

vec2 = c(1,6,2)

vec1+vec2

# 3. Write R code to append value to a given empty vector

vec\_empty = c()

values = c(12,4,3,56,11)

for (i in 1:length(values))

vec\_empty[i] <- values[i]

vec\_empty

# 4. Write R code to multiply two vectors of integer’s type and length 3.

vec3 = c(11,4,2)

vec4 = c(9,3,7)

vec3\*vec4

# 5. Write R code to divide two vectors of integer’s type and length 3

vec5 = c(23,41,66)

vec6 = c(11,3,35)

vec5/vec6

# 6. Write R code to find Sum, Mean and Product of a Vector

vec\_mean = c(12,3,56,1,2,7,11)

mean\_val = mean(vec\_mean)

mean\_val

# OR

vec\_sum = sum(vec\_mean)

vec\_sum

len = length(vec\_mean)

ans = vec\_sum/len

ans

# 7. Write R code to find Sum, Mean and Product of a Vector, ignore element like NA or NaN

vec\_nan = c(12,NA,56,1,NULL,7,11,NA,15)

vec\_nan

mean(vec\_nan,na.rm=TRUE)

sum2 = sum(vec\_nan,na.rm=TRUE)

len2 = length(vec\_nan)-2

ans2 = sum2/len2

ans2

# 8. Write R code to find the minimum and the maximum of a Vector

minmax = c(10, 20, 30, 25, 9, 26)

min(minmax)

max(minmax)

# 9. Write R code to sort a Vector in ascending and descending order.

vec\_sort = c(34,2,11,6,12,45,75,3)

sort(vec\_sort)

sort(vec\_sort,decreasing = TRUE)

# 10. Write R code to test whether a given vector contains a specified element.

vec\_find = c(2,5,3,7,12,4,19,32)

is.element(7,vec\_find)

is.element(99,vec\_find)

# 11.Write R code to count the specific value in a given vector

n=c(1,2,3,5,15,1,5,5,5)

a=sum(n==5)

a

# 12 Write R. code to access the last value in a given vector

n2=c(5,66,78,3,2)

a=tail(n2,n=1)

a

1. Write R code to find second highest value in a given vector

x = c(5,2,3,6,10,9)

x

len = length(x)

print(sort(x, partial = len-1)[len-1])

1. Write R code to find nth highest value in a given vector.

x = c(5,2,3,6,10,9)

x

n = 1

print(sort(x, TRUE)[n])

print("n = 2")

n = 2

print(sort(x, TRUE)[n])

print("n = 3")

n = 3

print(sort(x, TRUE)[n])

print("n = 4")

n = 4

print(sort(x, TRUE)[n])

1. Write R code to find common elements from multiple vector

x=c(23,45,5,1,34,90)

y=c(32,45,76,45,1,90,31)

result = intersect(x,y)

result

1. Write R code to convert given dataframe column(s) to a vector.

d1 = c(1, 2, 3, 4, 5)

d2 = c(6, 7, 8, 9, 10)

d3 = c(11, 12, 13, 14, 15)

fr=data.frame(d1,d2,d3)

fr

1. Write R code to extract every nth element of a given vector.

range=1:50

range

print("After extracting:")

n=range[seq(1,length(range),4)]

n

1. Write R code to list the distinct values in a vector from a given vector.

k=c(23,24,25,26,3,4,1,67,87,3)

k

un=unique(k)

un

1. Write R code to find the elements of a given vector that are not in another given vector.

k=c(23,24,25,26,3,4,1,67,87,3)

l=c(23,24,5,12,13,21,56,76)

res=setdiff(k,l)

res

1. Write R code to reverse the order of given vector.

k=c(23,24,25,26,3,4,1,67,87,3)

k

print("Rev order is:")

reverse=rev(k)

reverse

1. Write R code to concatenate a vector.

k=c("Ajay","Charan")

l=c("Rizwan","Sai")

con=paste(k,l)

con

1. Write R code to count number of values in a range in a given vector.

v=c(2,5,4,23,24,12,14,56,57)

v

cc=sum(v>10 & v<30)

cc

1. Write R code to convert two columns of a data frame to a named vector.

df = data.frame(code = c("R","G","W","B"), name = c("Red", "Green", "White", "Black"))

df

result = setNames(as.character(df$name), df$code)

result

1. Write R code to create a vector and find the length and the dimension of the vector.

v=c(3,1,2,6,89,43,12,34,56,77)

v

d=dim(v)

d

l=length(v)

l

1. Write R code to test whether the value of the element of a given vector greater than 10 or not. Return TRUE or FALSE

v=c(11,5,9,10,13,2,45,67)

v

print(v>10)

1. Write R code to add 3 to each element in a given vector. Print the original and new vector.

v=c(11,5,9,10,13,2,45,67)

print("Original Vector is:")

v

new=v+3

print("new vector is:")

new

1. Write a R code to create a vector using: operator and seq() function.

x=1:20

x

s=seq(1,3,by=0.4)

s

z=seq(1, 5, length.out = 5)

z