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**R Lab Task 2**

**Lab Task 2 on Vectors and Performing operations on vectors:**

x<-c(1,2,3,4,5,6,7,8,9,10)

x

y=x\*3

y

z=x+2

z

z=x/2

z

sqrt(y)

1:25

10:1

-5:4

class(x)

p<-1:10

q<--5:4

p+q

p-q

p\*q

p^q

length(p)

length(q)

length(p+q)

x+c(1,2)

x+c(1,2,1)

x<=y

any(x<y)

all(x<y)

ch=c("ajay","Charan","Rizwan","Pushpa","seenu","srinivas","yesraj","pavan","deepak","vamsi")

ch

nchar(ch)

length(ch)

x[1]

x[c(1,2)]

ch[c(1,5)]

c(one="a",two="b",three="c")

w<--1:3

names(w)<-c("a","b","c")

w

q2=c("ajay","Pushpa","jagan")

q2f<-as.factor(q2)

q2f

as.numeric(q2f)

**OUTPUT:-**

>x<-c(1,2,3,4,5,6,7,8,9,10)

> x

[1] 1 2 3 4 5 6 7 8 9 10

> y=x\*3

> y

[1] 3 6 9 12 15 18 21 24 27 30

> z=x+2

> z

[1] 3 4 5 6 7 8 9 10 11 12

> z=x/2

> z

[1] 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

> sqrt(y)

[1] 1.732051 2.449490 3.000000 3.464102 3.872983 4.242641 4.582576 4.898979 5.196152 5.477226

> 1:25

[1] 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

> 10:1

[1] 10 9 8 7 6 5 4 3 2 1

> -5:4

[1] -5 -4 -3 -2 -1 0 1 2 3 4

> class(x)

[1] "numeric"

> p<-1:10

> q<--5:4

> p+q

[1] -4 -2 0 2 4 6 8 10 12 14

> p-q

[1] 6 6 6 6 6 6 6 6 6 6

> p\*q

[1] -5 -8 -9 -8 -5 0 7 16 27 40

> p\*q

[1] -5 -8 -9 -8 -5 0 7 16 27 40

> p^q

[1] 1.000000e+00 6.250000e-02 3.703704e-02 6.250000e-02 2.000000e-01 1.000000e+00 7.000000e+00 6.400000e+01

[9] 7.290000e+02 1.000000e+04

> length(p)

[1] 10

> length(q)

[1] 10

> length(p+q)

[1] 10

> x+c(1,2)

[1] 2 4 4 6 6 8 8 10 10 12

> x+c(1,2,3)

[1] 2 4 6 5 7 9 8 10 12 11

Warning message:

In x + c(1, 2, 3) :

longer object length is not a multiple of shorter object length

> x+c(1,2)

[1] 2 4 4 6 6 8 8 10 10 12

> x+c(1,2,3)

[1] 2 4 6 5 7 9 8 10 12 11

Warning message:

In x + c(1, 2, 3) :

longer object length is not a multiple of shorter object length

> x+c(1,2,1)

[1] 2 4 4 5 7 7 8 10 10 11

Warning message:

In x + c(1, 2, 1) :

longer object length is not a multiple of shorter object length

> x<=y

[1] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE

> any(x<y)

[1] TRUE

> all(x<y)

[1] TRUE

> ch=c("ajay","Charan","Rizwan","Pushpa","seenu","srinivas","yesraj","pavan","deepak","vamsi")

> ch

[1] "ajay" "Charan" "Rizwan" "Pushpa" "seenu" "srinivas" "yesraj" "pavan" "deepak"

[10] "vamsi"

> nchar(ch)

[1] 4 6 6 6 5 8 6 5 6 5

> length(ch)

[1] 10

> x[1]

[1] 1

> x[c(1,2)]

[1] 1 2

> ch[c(1,5)]

[1] "ajay" "seenu"

> c(one="a",two="b",three="c")

one two three

"a" "b" "c"

> names(w)=ch

Error in names(w) = ch : object 'w' not found

> names(w)=c("a","b","c")

Error in names(w) = c("a", "b", "c") : object 'w' not found

> w

Error: object 'w' not found

> w<--1:3

> names(w)<-c("a","b","c")

> w

a b c <NA> <NA>

-1 0 1 2 3

> q2=c("ajay","Pushpa","jagan")

> q2f<-as.factor(q2)

> q2f

[1] ajay Pushpa jagan

Levels: ajay jagan Pushpa

> as.numeric(q2f)

[1] 1 3 2