In [11]:

```
v1<-c(1,2,3,4)
typeof(v1)
```

'double'

In [12]:

```
v2<-c(1L,2L,3L)
typeof(v2)
```

'integer'

In [13]:

```
v3<-c('pradnya','Pratiksha','Akanksha','Aarti')
typeof(v3)
```

'character'

In [14]:

```
v4<-c(TRUE,FALSE,TRUE,FALSE)
typeof(v4)
```

'logical'

In [25]:

```
v5<-1:5
cat('Using colon',v5)
```

```
Using colon 1 2 3 4 5
```

In [54]:

```
v6<-seq(1,4,length.out=6)
cat('Using seq() function',v6)
```

```
Using seq() function 1 1.6 2.2 2.8 3.4 4
```

In [ ]:

```

```

In [55]:

```
#access elements with an index number
x<-c(1,2,3,4,5,6)
cat('Using subscript operator',x[4])
```

```
Using subscript operator 4
```

In [3]:

```
#by passing a range of values inside the vector index
y<-c(1,2,3,4,5,6)
cat('Using combine() function',y[y>4])
```

```
Using combine() function 5 6
```

In [4]:

```
#using logical expression
z<-c(1,2,3,4,5)
cat('Using logical expression',z[c(2,5)])
```

```
Using logical expression 2 5
```

In [6]:

```
#Indexing Using character Vector
v7<-c("Pradnya"=101,"Pratiksha"=102,"Akanksha"=103,"Aarti"=104)
cat('Using character vector',v7["Pradnya"])
```

```
Using character vector 101
```

In [7]:

```
a<-c(1,2,3,4,5)
a[c(TRUE,FALSE,TRUE,FALSE,TRUE)]
```

1 3 5

In [ ]:

```

```

In [13]:

```
#combining vectors
num=c(1,2,3,4)
str=c('Pradnya','Pratiksha','Akanksha')
z=c(num,str)
cat(z)
```

1 2 3 4 Pradnya Pratiksha Akanksha

In [15]:

```
#Arithmetic operations on vector
a=c(1,2,3,4)
b=c(1,2,3,4)
a+b#addittion
```

2 4 6 8

In [16]:

```
a=c(1,2,3,4)
b=c(1,2,3,4)
a-b#Substraction
```

0 0 0 0

In [17]:

```
a=c(1,2,3,4)
b=c(1,2,3,4)
a*b#Multiplication
```

1 4 9 16

In [18]:

```
a=c(1,2,3,4)
b=c(1,2,3,4)
a/b#Division
```

1 1 1 1

In [19]:

```
a=c(1,2,3,4)
b=c(1,2,3,4)
a%%b#Raminder operation
```

0 0 0 0

In [ ]:

```

```

In [63]:

```
#Logical Index vector
name<-c('Ram','Sham','Siya')
L<-c(TRUE,FALSE,TRUE)
name[L]

```

'Ram' 'Siya'

In [62]:

```
#Numeric Index Vector
name<-c('Pradnya','Smita','Mayur','Sanjay','Meghmala')
name[-4]
```

'Pradnya' 'Smita' 'Mayur' 'Meghmala'

In [36]:

```
name<-c('Pradnya','Smita','Mayur','Sanjay','Meghmala')
name[2]
```

'Smita'

In [61]:

```
name<-c('Pradnya','Smita','Mayur','Sanjay','Meghmala')
name[16]
```

NA

In [60]:

```
#Duplicate Index
name<-c('Pradnya','Smita','Mayur','Sanjay','Meghmala')
name[c(1,2,3,3)]
```

'Pradnya' 'Smita' 'Mayur' 'Mayur'

In [59]:

```
#Range Index
name<-c('Pradnya','Smita','Mayur','Sanjay','Meghmala')
name[1:3]
```

'Pradnya' 'Smita' 'Mayur'

In [ ]:

```
#sorting Elements in Vector
```

In [51]:

```
num<-c(1,23,4,56,7,5,8)
asc<-sort(num)
cat(asc)
```

```
1 4 5 7 8 23 56
```

In [53]:

```
num<-c(1,23,4,56,7,5,8)
des<-sort(num,decreasing=TRUE)
cat(des)
```

```
56 23 8 7 5 4 1
```

In [ ]:

```
#Names of vector Members
```

In [58]:

```
lib<-c('1','2','3','4')
names(lib)=c('one','two','three','four')
lib['one']
```

one: '1'