

In [3]:

```
1 #Creating List
2 L<-list('Ram', 'Sham', c(1,2,3,4), TRUE, 1.03)
3 L
```

```
1. 'Ram'
2. 'Sham'
3. 1 2 3 4
4. TRUE
5. 1.03
```

In [5]:

```
1 #Giving Names to list
2 L<-list(c(1,2,3), list('Ram', 'Sham', 'Siya'), matrix(c(20,34,56,77,55,32), nrow=2))
3 names(L)=c('Rollno', 'Name', 'Marks')
4 print(L)
5
```

```
$Rollno
[1] 1 2 3
```

```
$Name
$Name[[1]]
[1] "Ram"
```

```
$Name[[2]]
[1] "Sham"
```

```
$Name[[3]]
[1] "Siya"
```

```
$Marks
      [,1] [,2] [,3]
[1,]   20   56   55
[2,]   34   77   32
```

In [30]:

```
1 #accessing elements using index
2 L<-list(c(1,2,3), list('Ram', 'Sham', 'Siya'), matrix(c(20,34,56,77,55,32), nrow=2))
3 names(L)=c('Rollno', 'Name', 'Marks')
4 print(L[2])
5
```

```
$Name
$Name[[1]]
[1] "Ram"
```

```
$Name[[2]]
[1] "Sham"
```

```
$Name[[3]]
[1] "Siya"
```

In [31]:

```
1 #Accessing Elements using List Name
```

In [32]:

```
1 L<-list(c(1,2,3), list('Ram', 'Sham', 'Siya'), matrix(c(20,34,56,77,55,32), nrow=2))
2 names(L)=c('Rollno', 'Name', 'Marks')
3 print(L['Name'])
4
```

```
$Name
$Name[[1]]
[1] "Ram"
```

```
$Name[[2]]
[1] "Sham"
```

```
$Name[[3]]
[1] "Siya"
```

In [33]:

```

1
2 L<-list(c(1,2,3),list('Ram','Sham','Siya'),matrix(c(20,34,56,77,55,32),nrow=2))
3 names(L)=c('Rollno','Name','Marks')
4 print(L['Rollno'])
5

```

```

$Rollno
[1] 1 2 3

```

In [34]:

```

1 L<-list(c(1,2,3),list('Ram','Sham','Siya'),matrix(c(20,34,56,77,55,32),nrow=2))
2 names(L)=c('Rollno','Name','Marks')
3 print(L['Marks'])
4

```

```

$Marks
      [,1] [,2] [,3]
[1,]   20   56   55
[2,]   34   77   32

```

In [35]:

```

1 #Adding elements in List
2 L<-list(c(1,2,3),list('Ram','Sham','Siya'),matrix(c(20,34,56,77,55,32),nrow=2))
3 names(L)=c('Rollno','Name','Marks')
4 L[4]<-1234567
5 print(L)
6

```

```

$Rollno
[1] 1 2 3

```

```

$Name
$Name[[1]]
[1] "Ram"

```

```

$Name[[2]]
[1] "Sham"

```

```

$Name[[3]]
[1] "Siya"

```

```

$Marks
      [,1] [,2] [,3]
[1,]   20   56   55
[2,]   34   77   32

```

```

[[4]]
[1] 1234567

```

In [36]:

```

1 #Removing List elements
2 L<-list(c(1,2,3),list('Ram','Sham','Siya'),matrix(c(20,34,56,77,55,32),nrow=2))
3 names(L)=c('Rollno','Name','Marks')
4 L[3]<-NULL
5 print(L)

```

```

$Rollno
[1] 1 2 3

```

```

$Name
$Name[[1]]
[1] "Ram"

```

```

$Name[[2]]
[1] "Sham"

```

```

$Name[[3]]
[1] "Siya"

```

In [27]:

```
1 #Updating List Elements
2 L<-list(c(1,2,3),list('Ram','Sham','Siya'),matrix(c(20,34,56,77,55,32),nrow=2))
3 names(L)=c('Rollno','Name','Marks')
4 L[1]<-12345
5 print(L)
```

```
$Rollno
[1] 12345
```

```
$Name
$name[[1]]
[1] "Ram"
```

```
$Name[[2]]
[1] "Sham"
```

```
$Name[[3]]
[1] "Siya"
```

```
$Marks
      [,1] [,2] [,3]
[1,]   20   56   55
[2,]   34   77   32
```

In [46]:

```
1 #converting List into vector
2 a<-list(1:5)
3 b<-list(11:17)
4 print(a)
5 print(b)
6 v1=unlist(a)
7 v2=unlist(b)
8
```

```
[[1]]
[1] 1 2 3 4 5
```

```
[[1]]
[1] 11 12 13 14 15 16 17
```

In [48]:

```
1 #Adding two vectors
2 v=v1+v2
3 print(v)
```

```
Warning message in v1 + v2:
"longer object length is not a multiple of shorter object length"
```

```
[1] 12 14 16 18 20 17 19
```

In [53]:

```

1 #Merege two Lists
2 a<-list(1,2,3,4,5)
3 b<-list(11,12,13,14,15)
4 c<-list(a,b)
5 print(c)

```

```

[[1]]
[[1]][[1]]
[1] 1

```

```

[[1]][[2]]
[1] 2

```

```

[[1]][[3]]
[1] 3

```

```

[[1]][[4]]
[1] 4

```

```

[[1]][[5]]
[1] 5

```

```

[[2]]
[[2]][[1]]
[1] 11

```

```

[[2]][[2]]
[1] 12

```

```

[[2]][[3]]
[1] 13

```

```

[[2]][[4]]
[1] 14

```

```

[[2]][[5]]
[1] 15

```

In [14]:

```

1 l1<-list('a','b','f','g','c','d','e','h')
2 s<-unlist(l1)
3 s1<-sort(s,decreasing=TRUE)
4 s1

```

```

'h' 'g' 'f' 'e' 'd' 'c' 'b' 'a'

```

In [16]:

```

1 l1<-list('ab','aa','b','f','g','c','d','e','h')
2 s<-unlist(l1)
3 s1<-sort(s)
4 s1

```

```

'aa' 'ab' 'b' 'c' 'd' 'e' 'f' 'g' 'h'

```

In [ ]:

```

1

```