#creation of List:-

```
list_1<-list("Shubham","Arpita","Vaishali")
list_1
list_data<-list("Shubham","Arpita",c(1,2,3,4,5),TRUE,FALSE,22.5,12L)
print(list_data)
```

#Operation on lists:-

1)Giving name to list:-

```
list_data <- list(c("Shubham","Nishka","Gunjan"), matrix(c(40,80,60,70,90,80), nrow = 2),
   list("BCA","MCA","B.tech"))
names(list_data) <- c("Students", "Marks", "Course")
list_data
```

2)Accessing elements using index:-

```
print(list_data[1])
```

3)Accessing elements using names:-

```
print(list_data["Students"])
print(list_data$Marks)
```

4)Merging Lists:-

```
Even_list <- list(2,4,6)
Odd_list <- list(1,3,5)
# Merging the two lists.
merged.list <- list(Even_list,Odd_list)
print(merged.list)
```

OUTPUT: -

```
#creation of List:-
> list_1<-list("Shubham","Arpita","Vaishali")
> list_1
[[1]]
[1] "Shubham"

[[2]]
[1] "Arpita"

[[3]]
[1] "Vaishali"

> list_data<-list("Shubham","Arpita",c(1,2,3,4,5),TRUE,FALSE,22.5,12L)
> print(list_data)
[[1]]
[1] "Shubham"

[[2]]
[1] "Arpita"

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

```
[[4]]
[1] TRUE

[[5]]
[1] FALSE

[[6]]
[1] 22.5

[[7]]
[1] 12

> #Operation on lists:-
> #1)Giving name to list:-
> list_data <- list(c("Shubham","Nishka","Gunjan"), matrix(c(40,80,60,70,90,80), nrow = 2),
+     list("BCA","MCA","B.tech"))
> names(list_data) <- c("Students", "Marks", "Course")
> list_data
$Students
[1] "Shubham" "Nishka"  "Gunjan"

$Marks
     [,1] [,2] [,3]
[1,]   40   60   90
[2,]   80   70   80

$Course
$Course[[1]]
[1] "BCA"

$Course[[2]]
[1] "MCA"

$Course[[3]]
[1] "B.tech"


> #2)Accessing elements using index:-
> print(list_data[1])
$Students
[1] "Shubham" "Nishka"  "Gunjan"

> #3)Accessing elements using names:-
> print(list_data["Students"])
$Students
[1] "Shubham" "Nishka"  "Gunjan"
```

```
> print(list_data$Marks)
     [,1] [,2] [,3]
[1,]   40   60   90
[2,]   80   70   80
> #4)Merging Lists:-
> Even_list <- list(2,4,6)
> Odd_list <- list(1,3,5)
> # Merging the two lists.
> merged.list <- list(Even_list,Odd_list)
> print(merged.list)
[[1]]
[[1]][[1]]
[1] 2

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

[[1]][[3]]
[1] 6


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

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

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