```r
my_mat<-matrix(c(2:21),nrow=5,byrow = TRUE)
my_mat
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    2    3    4    5
## [2,]    6    7    8    9
## [3,]   10   11   12   13
## [4,]   14   15   16   17
## [5,]   18   19   20   21
```

```r
my_mat<-matrix(c(4,3,5,6,7,8),nrow=2,ncol=3,byrow = FALSE)
my_mat
```

```
##      [,1] [,2] [,3]
## [1,]    4    5    7
## [2,]    3    6    8
```

```r
x<-matrix(c(5:16),nrow=4,byrow=TRUE)
x
```

```
##      [,1] [,2] [,3]
## [1,]    5    6    7
## [2,]    8    9   10
## [3,]   11   12   13
## [4,]   14   15   16
```

```r
x<-matrix(c(5:16),nrow=4,byrow=FALSE)
x
```

```
##      [,1] [,2] [,3]
## [1,]    5    9   13
## [2,]    6   10   14
## [3,]    7   11   15
## [4,]    8   12   16
```

```r
row_name<-c("r1","r2","r3","r4")
col_name<-c("c1","c2","c3")
```

```r
z<-matrix(c(7:18),nrow=4,byrow = TRUE,dimnames=list(row_name,col_name))
z
```

```
##    c1 c2 c3
## r1  7  8  9
## r2 10 11 12
## r3 13 14 15
## r4 16 17 18
```

```r
z[3,1]
```

```
## [1] 13
```

```r
z[4,2]
```

```
## [1] 17
```

```r
z[2,]
```

```
## c1 c2 c3
## 10 11 12
```

```r
z[3,2]<-100
```

```r
z
```

```
##    c1  c2 c3
## r1  7   8  9
## r2 10  11 12
## r3 13 100 15
## r4 16  17 18
```

```r
z[z==100]<-0
```

```r
z[z<15]<-00
```

```r
z
```

```
##    c1 c2 c3
## r1  0  0  0
## r2  0  0  0
## r3  0  0 15
## r4 16 17 18
```

```r
rbind(z,c(2,3,4))
```

```
##    c1 c2 c3
## r1  0  0  0
## r2  0  0  0
## r3  0  0 15
## r4 16 17 18
##     2  3  4
```

```r
cbind(z,c(8,9,11,45))
```

```
##    c1 c2 c3
## r1  0  0  0  8
## r2  0  0  0  9
## r3  0  0 15 11
## r4 16 17 18 45
```

```
t(z)
```

```
##    r1 r2 r3 r4
## c1  0  0  0 16
## c2  0  0  0 17
## c3  0  0 15 18
```

```
a1<-matrix(c(5:16),nrow=4,ncol=3,byrow=TRUE)
a1
```

```
##      [,1] [,2] [,3]
## [1,]    5    6    7
## [2,]    8    9   10
## [3,]   11   12   13
## [4,]   14   15   16
```

```
b1<-matrix(c(4:15),nrow=4,ncol=3,byrow=TRUE)
b1
```

```
##      [,1] [,2] [,3]
## [1,]    4    5    6
## [2,]    7    8    9
## [3,]   10   11   12
## [4,]   13   14   15
```

```
sum<-a1+b1
sum
```

```
##      [,1] [,2] [,3]
## [1,]    9   11   13
## [2,]   15   17   19
## [3,]   21   23   25
## [4,]   27   29   31
```