Big Data analysis and R Programming I

위 문서는 postech에서 제공하는 **빅데이터분석과 R프로그래밍I** 정리입니다

vector

```
x<-c(1,3,5,7,9)
x[3]
```

```
[1] 5
```

subset of vector : delete the first element

```
x[-1]
```

```
[1] 3 5 7 9
```

subset of vector : delete the first two element

```
x1<-x[-c(1,2)]
x1
```

```
[1] 5 7 9
```

create vector using 'seq'

sequence of 20 values

```
y1<-seq(0,10, length=20)
y1
```

```
 [1]  0.0000000  0.5263158  1.0526316  1.5789474  2.1052632  2.6315789
 [7]  3.1578947  3.6842105  4.2105263  4.7368421  5.2631579  5.7894737
[13]  6.3157895  6.8421053  7.3684211  7.8947368  8.4210526  8.9473684
[19]  9.4736842 10.0000000
```

sequence of (1 to 10) by 0.5

```
y2<-seq(0,10, by=0.5)
y2
```

```
 [1]  0.0  0.5  1.0  1.5  2.0  2.5  3.0  3.5  4.0  4.5  5.0  5.5  6.0  6.5  7.0
[16]  7.5  8.0  8.5  9.0  9.5 10.0
```

using rep

```
z1<-rep(1:4, 2)
z1
```

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

```
z2<-rep(1:2,5)
z2
```

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

combine vectors in a row or column

```
c1<-c(2,4,6,8,10)
c2<-cbind(x, c1)
c2
```

```
     x c1
[1,] 1  2
[2,] 3  4
[3,] 5  6
[4,] 7  8
[5,] 9 10
```

```
c3<-rbind(x,c1)
c3
```

```
  [,1] [,2] [,3] [,4] [,5]
x     1    3    5    7    9
c1    2    4    6    8   10
```

create matrix

two row matrix with 1 to 10

```
m1<-matrix(1:10, nrow=2)
m1
```

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

three columns matrix with 1:6

```
m2<-matrix(1:6, ncol=3)
m2
```

```
     [,1] [,2] [,3]
[1,]    1    3    5
[2,]    2    4    6
```

matrix filled by rows, defalut: filled by cloumns

```
m3<-matrix(1:6, nrow=2, byrow=T)
m3
```

```
     [,1] [,2] [,3]
[1,]    1    2    3
[2,]    4    5    6
```

higher order of array

```
a1<-array(c(1:18), dim=c(3,3,2))
a1
```

```
, , 1

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

, , 2

     [,1] [,2] [,3]
[1,]   10   13   16
[2,]   11   14   17
[3,]   12   15   18
```

a1[, ,1]: 첫번째 매트릭스
a1[, ,2]: 두번째 매트릭스