

# MANAJEMEN DATA DI R DENGAN COMMAND LINE

MODE	CONTOH PERINTAH DI COMMAND LINE
NUMERIC	>21 >c(2.3,4.5,6.7,8) >data.bulan=c(1,2,3,4,5,6)
COMPLEX	>1+5i >sqrt(as.complex(-5))
LOGICAL	>data.tahun>1988
CHARACTER	>c("Budi", "Wati") >c("F", "T", "2")

**\*Empat macam mode data yang dikenal R**

```
> c(T,1:10)
[1] 1 1 2 3 4 5 6 7 8 9 10
> x=c(1:10)
> x
[1] 1 2 3 4 5 6 7 8 9 10
> mode(x)
[1] "numeric"
> length(x)
[1] 10
> x[2]      #menampilkan elen ke-2
[1] 2
> x[c(1,3,7)] #menampilkan elemen ke-1,3,7
[1] 1 3 7
> x[-c(2,6)] #menampilkan semua elemen kecuali elemen ke-2 dan 6
[1] 1 3 4 5 7 8 9 10
> x[x>5]    #menampilkan semua elemen yang lebih dari 5
[1] 6 7 8 9 10
> y=x[x>5]  #menampilkan semua elemen yang lebih dari 5 dgn nama y
> y
[1] 6 7 8 9 10
```

**\*Data Vektor**

```
> matriks.1=matrix(c(1,2,3,4,5,6),nrow=2,ncol=3)
> matriks.1
      [,1] [,2] [,3]
[1,]    1    3    5
[2,]    2    4    6
> matriks.2=matrix(1:6,nrow=2,ncol=3)
> matriks.2
      [,1] [,2] [,3]
[1,]    1    3    5
[2,]    2    4    6
> matriks.3=matrix(1:6,nrow=2)
> matriks.3
      [,1] [,2] [,3]
[1,]    1    3    5
[2,]    2    4    6
> matriks.4=matrix(1:6,2)
> matriks.4
      [,1] [,2] [,3]
[1,]    1    3    5
[2,]    2    4    6
```



## \*Data Matriks

```
> DATA=c(1.2,3.4,5.6,7.8,9.1,2.3)
```

```
> DATA
```

```
[1] 1.2 3.4 5.6 7.8 9.1 2.3
```

```
> matriks.A=matrix(DATA,3,2)
```

```
> matriks.A
```

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

```
[1,] 1.2 7.8
```

```
[2,] 3.4 9.1
```

```
[3,] 5.6 2.3
```

```
> matriks.B=matrix(DATA,3,2,byrow=T)
```



#pengisian matriks baris-perbaris

```
> matriks.B
```

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

```
[1,] 1.2 3.4
```

```
[2,] 5.6 7.8
```

```
[3,] 9.1 2.3
```

```
> dim(matriks.A)
```

```
[1] 3 2
```

```
> length(matriks.A)
```

```
[1] 6
```

```

> b=matrix(c(1:4),2)
> b
      [,1] [,2]
[1,]    1    3
[2,]    2    4

```

operator	Keterangan	Contoh
*	Perkalian elemen demi elemen dari matriks	$b*b$
%*%	Perkalian matriks	$b\%*\%b$
Solve	Invers dari matriks	$\text{solve}(b)$
t	Transpose dari matriks	$t(b)$
crossprod	Crossproduct matriks ( $t(x)\%*\%x$ )	$\text{crossprod}(b)$

# \* Operator matriks dan vektor

$$* A = \begin{bmatrix} 2 & 4 & 4 \\ 3 & 8 & 5 \\ 5 & 1 & 2 \\ 8 & 9 & 3 \end{bmatrix}$$

$$B = \begin{bmatrix} 1 & 2 & 3 \\ 7 & 6 & 1 \\ 2 & 9 & 5 \\ 8 & 1 & 2 \end{bmatrix}$$

```
> C
      [,1] [,2] [,3] [,4]
[1,]    2    3    1    5
[2,]    3    4   10    6
[3,]    5    6    2    2
[4,]    6    7    4    1
```

Hitung:

1.  $A \times B^T$

2.  $A \times A^T$

3.  $C^{-1}$

**\*Latihan**