3 - Dataframe

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```
x=c(1:10)
y=c(10:1)
w=c('etq','etq1','etq2','etq3','etq4','etq5','etq6','etq7','etq8','etq9')

length(x)
```

```
## [1] 10
```

```
length(y)
```

```
## [1] 10
```

```
length(w)
```

```
## [1] 10
```

```
#Crear dataframe
tabla = data.frame(w,x,y)
(tabla)
```

```
##       w  x  y
## 1   etq  1 10
## 2  etq1  2  9
## 3  etq2  3  8
## 4  etq3  4  7
## 5  etq4  5  6
## 6  etq5  6  5
## 7  etq6  7  4
## 8  etq7  8  3
## 9  etq8  9  2
## 10 etq9 10  1
```

```
#Reecribir nombres
tabla = data.frame(var1=w, var2=x, var3=y)
(tabla)
```

```
##    var1 var2 var3
## 1   etq    1   10
```

```
## 2  etq1    2    9
## 3  etq2    3    8
## 4  etq3    4    7
## 5  etq4    5    6
## 6  etq5    6    5
## 7  etq6    7    4
## 8  etq7    8    3
## 9  etq8    9    2
## 10 etq9   10    1
```

```
#Consultas en dataframe
# condiciones para filas , columnas
(tabla[1:5,2])
```

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

```
(tabla[1:5,c('var1','var2')])
```

```
##   var1 var2
## 1  etq    1
## 2 etq1    2
## 3 etq2    3
## 4 etq3    4
## 5 etq4    5
```

```
#Informacion del dataframe
#?mtcars

#Cabezera y fianl del dataframe
head(mtcars)
```

```
##                   mpg cyl disp  hp drat    wt  qsec vs am gear carb
## Mazda RX4         21.0   6  160 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag     21.0   6  160 110 3.90 2.875 17.02  0  1    4    4
## Datsun 710        22.8   4  108  93 3.85 2.320 18.61  1  1    4    1
## Hornet 4 Drive    21.4   6  258 110 3.08 3.215 19.44  1  0    3    1
## Hornet Sportabout 18.7   8  360 175 3.15 3.440 17.02  0  0    3    2
## Valiant           18.1   6  225 105 2.76 3.460 20.22  1  0    3    1
```

```
tail(mtcars)
```

```
##                 mpg cyl  disp  hp drat    wt qsec vs am gear carb
## Porsche 914-2  26.0   4 120.3  91 4.43 2.140 16.7  0  1    5    2
## Lotus Europa   30.4   4  95.1 113 3.77 1.513 16.9  1  1    5    2
## Ford Pantera L 15.8   8 351.0 264 4.22 3.170 14.5  0  1    5    4
## Ferrari Dino   19.7   6 145.0 175 3.62 2.770 15.5  0  1    5    6
## Maserati Bora  15.0   8 301.0 335 3.54 3.570 14.6  0  1    5    8
## Volvo 142E     21.4   4 121.0 109 4.11 2.780 18.6  1  1    4    2
```

```r
#Filtrar filas y columans
mtcars[c(1,5), 1:4]
```

```
##                   mpg cyl disp  hp
## Mazda RX4         21.0   6  160 110
## Hornet Sportabout 18.7   8  360 175
```

```r
#Nombresd de columnas
colnames(mtcars)
```

```
##  [1] "mpg"  "cyl"  "disp" "hp"   "drat" "wt"   "qsec" "vs"   "am"   "gear"
## [11] "carb"
```

```r
#columnas del data frame
mtcars$hp
```

```
##  [1] 110 110  93 110 175 105 245  62  95 123 123 180 180 180 205 215 230  66  52
## [20]  65  97 150 150 245 175  66  91 113 264 175 335 109
```

```r
#filtrar por columnas
mtcars[mtcars$cyl==8, 1:3]
```

```
##                     mpg cyl  disp
## Hornet Sportabout   18.7   8 360.0
## Duster 360          14.3   8 360.0
## Merc 450SE          16.4   8 275.8
## Merc 450SL          17.3   8 275.8
## Merc 450SLC         15.2   8 275.8
## Cadillac Fleetwood  10.4   8 472.0
## Lincoln Continental 10.4   8 460.0
## Chrysler Imperial   14.7   8 440.0
## Dodge Challenger    15.5   8 318.0
## AMC Javelin         15.2   8 304.0
## Camaro Z28          13.3   8 350.0
## Pontiac Firebird    19.2   8 400.0
## Ford Pantera L      15.8   8 351.0
## Maserati Bora       15.0   8 301.0
```

```r
#Dimensiones
dim(mtcars)
```

```
## [1] 32 11
```

```r
nrow(mtcars)
```

```
## [1] 32
```

```r
ncol(mtcars)
```

```
## [1] 11
```