

R Notebook

Data Frame e Iris

```
df <- iris
```

```
head(df,5)
```

```
##   Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 1         5.1         3.5         1.4         0.2   setosa
## 2         4.9         3.0         1.4         0.2   setosa
## 3         4.7         3.2         1.3         0.2   setosa
## 4         4.6         3.1         1.5         0.2   setosa
## 5         5.0         3.6         1.4         0.2   setosa
```

```
tail(df,5)
```

```
##   Sepal.Length Sepal.Width Petal.Length Petal.Width  Species
## 146         6.7         3.0         5.2         2.3 virginica
## 147         6.3         2.5         5.0         1.9 virginica
## 148         6.5         3.0         5.2         2.0 virginica
## 149         6.2         3.4         5.4         2.3 virginica
## 150         5.9         3.0         5.1         1.8 virginica
```

```
str(df)
```

```
## 'data.frame':   150 obs. of  5 variables:
## $ Sepal.Length: num  5.1 4.9 4.7 4.6 5 5.4 4.6 5 4.4 4.9 ...
## $ Sepal.Width : num  3.5 3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
## $ Petal.Length: num  1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
## $ Petal.Width : num  0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
## $ Species      : Factor w/ 3 levels "setosa","versicolor",...: 1 1 1 1 1 1 1 1 1 1 ...
```

```
str(Orange)
```

```
## Classes 'nfnGroupedData', 'nfGroupedData', 'groupedData' and 'data.frame':   35 obs. of  3 variables
## $ Tree      : Ord.factor w/ 5 levels "3"<"1"<"5"<"2"<...: 2 2 2 2 2 2 2 4 4 ...
## $ age       : num  118 484 664 1004 1231 ...
## $ circumference: num  30 58 87 115 120 142 145 33 69 111 ...
## - attr(*, "formula")=Class 'formula' language circumference ~ age | Tree
## ..- attr(*, ".Environment")=<environment: R_EmptyEnv>
## - attr(*, "labels")=List of 2
## ..$ x: chr "Time since December 31, 1968"
## ..$ y: chr "Trunk circumference"
## - attr(*, "units")=List of 2
## ..$ x: chr "(days)"
## ..$ y: chr "(mm)"
```

```
names(df)
```

```
## [1] "Sepal.Length" "Sepal.Width" "Petal.Length" "Petal.Width" "Species"
```

```
colnames(df)
```

```
## [1] "Sepal.Length" "Sepal.Width" "Petal.Length" "Petal.Width" "Species"
```

```
rownames(df)
```

```
## [1] "1" "2" "3" "4" "5" "6" "7" "8" "9" "10" "11" "12"
## [13] "13" "14" "15" "16" "17" "18" "19" "20" "21" "22" "23" "24"
## [25] "25" "26" "27" "28" "29" "30" "31" "32" "33" "34" "35" "36"
## [37] "37" "38" "39" "40" "41" "42" "43" "44" "45" "46" "47" "48"
## [49] "49" "50" "51" "52" "53" "54" "55" "56" "57" "58" "59" "60"
## [61] "61" "62" "63" "64" "65" "66" "67" "68" "69" "70" "71" "72"
## [73] "73" "74" "75" "76" "77" "78" "79" "80" "81" "82" "83" "84"
## [85] "85" "86" "87" "88" "89" "90" "91" "92" "93" "94" "95" "96"
## [97] "97" "98" "99" "100" "101" "102" "103" "104" "105" "106" "107" "108"
## [109] "109" "110" "111" "112" "113" "114" "115" "116" "117" "118" "119" "120"
## [121] "121" "122" "123" "124" "125" "126" "127" "128" "129" "130" "131" "132"
## [133] "133" "134" "135" "136" "137" "138" "139" "140" "141" "142" "143" "144"
## [145] "145" "146" "147" "148" "149" "150"
```

```
dimnames(df)
```

```
## [[1]]
## [1] "1" "2" "3" "4" "5" "6" "7" "8" "9" "10" "11" "12"
## [13] "13" "14" "15" "16" "17" "18" "19" "20" "21" "22" "23" "24"
## [25] "25" "26" "27" "28" "29" "30" "31" "32" "33" "34" "35" "36"
## [37] "37" "38" "39" "40" "41" "42" "43" "44" "45" "46" "47" "48"
## [49] "49" "50" "51" "52" "53" "54" "55" "56" "57" "58" "59" "60"
## [61] "61" "62" "63" "64" "65" "66" "67" "68" "69" "70" "71" "72"
## [73] "73" "74" "75" "76" "77" "78" "79" "80" "81" "82" "83" "84"
## [85] "85" "86" "87" "88" "89" "90" "91" "92" "93" "94" "95" "96"
## [97] "97" "98" "99" "100" "101" "102" "103" "104" "105" "106" "107" "108"
## [109] "109" "110" "111" "112" "113" "114" "115" "116" "117" "118" "119" "120"
## [121] "121" "122" "123" "124" "125" "126" "127" "128" "129" "130" "131" "132"
## [133] "133" "134" "135" "136" "137" "138" "139" "140" "141" "142" "143" "144"
## [145] "145" "146" "147" "148" "149" "150"
##
## [[2]]
## [1] "Sepal.Length" "Sepal.Width" "Petal.Length" "Petal.Width" "Species"
```

```
nrow(df)
```

```
## [1] 150
```

```
ncol(df)
```

```
## [1] 5
```

```
dim(df)
```

```
## [1] 150 5
```

```
df$Species
```

```
## [1] setosa setosa setosa setosa setosa setosa
## [7] setosa setosa setosa setosa setosa setosa
## [13] setosa setosa setosa setosa setosa setosa
## [19] setosa setosa setosa setosa setosa setosa
## [25] setosa setosa setosa setosa setosa setosa
```

```
## [31] setosa      setosa      setosa      setosa      setosa      setosa
## [37] setosa      setosa      setosa      setosa      setosa      setosa
## [43] setosa      setosa      setosa      setosa      setosa      setosa
## [49] setosa      setosa      versicolor  versicolor  versicolor  versicolor
## [55] versicolor  versicolor  versicolor  versicolor  versicolor  versicolor
## [61] versicolor  versicolor  versicolor  versicolor  versicolor  versicolor
## [67] versicolor  versicolor  versicolor  versicolor  versicolor  versicolor
## [73] versicolor  versicolor  versicolor  versicolor  versicolor  versicolor
## [79] versicolor  versicolor  versicolor  versicolor  versicolor  versicolor
## [85] versicolor  versicolor  versicolor  versicolor  versicolor  versicolor
## [91] versicolor  versicolor  versicolor  versicolor  versicolor  versicolor
## [97] versicolor  versicolor  versicolor  versicolor  virginica   virginica
## [103] virginica   virginica   virginica   virginica   virginica   virginica
## [109] virginica   virginica   virginica   virginica   virginica   virginica
## [115] virginica   virginica   virginica   virginica   virginica   virginica
## [121] virginica   virginica   virginica   virginica   virginica   virginica
## [127] virginica   virginica   virginica   virginica   virginica   virginica
## [133] virginica   virginica   virginica   virginica   virginica   virginica
## [139] virginica   virginica   virginica   virginica   virginica   virginica
## [145] virginica   virginica   virginica   virginica   virginica   virginica
## Levels: setosa versicolor virginica
```

```
df$Sepal.Length[1:10]
```

```
## [1] 5.1 4.9 4.7 4.6 5.0 5.4 4.6 5.0 4.4 4.9
```

Accesso al DF

```
df[2,3]
```

```
## [1] 1.4
```

```
df[1:10,]
```

```
##      Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 1           5.1           3.5           1.4           0.2  setosa
## 2           4.9           3.0           1.4           0.2  setosa
## 3           4.7           3.2           1.3           0.2  setosa
## 4           4.6           3.1           1.5           0.2  setosa
## 5           5.0           3.6           1.4           0.2  setosa
## 6           5.4           3.9           1.7           0.4  setosa
## 7           4.6           3.4           1.4           0.3  setosa
## 8           5.0           3.4           1.5           0.2  setosa
## 9           4.4           2.9           1.4           0.2  setosa
## 10          4.9           3.1           1.5           0.1  setosa
```

```
df[1:10, 2:4]
```

```
##      Sepal.Width Petal.Length Petal.Width
## 1           3.5           1.4           0.2
## 2           3.0           1.4           0.2
## 3           3.2           1.3           0.2
## 4           3.1           1.5           0.2
## 5           3.6           1.4           0.2
## 6           3.9           1.7           0.4
## 7           3.4           1.4           0.3
```

```
## 8      3.4      1.5      0.2
## 9      2.9      1.4      0.2
## 10     3.1      1.5      0.1
```

```
df[df$Species == "setosa" & df$Sepal.Width > 4, ][c(1,3), c(2,5)]
```

```
##      Sepal.Width Species
## 16          4.4   setosa
## 34          4.2   setosa
```