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| subset {base} | R Documentation |

**Subsetting Vectors, Matrices and Data Frames**

**Description**

Return subsets of vectors, matrices or data frames which meet conditions.

**Usage**

subset(x, ...)

## Default S3 method:

subset(x, subset, ...)

## S3 method for class 'matrix'

subset(x, subset, select, drop = FALSE, ...)

## S3 method for class 'data.frame'

subset(x, subset, select, drop = FALSE, ...)

**Arguments**

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| x | object to be subsetted. |
| subset | logical expression indicating elements or rows to keep: missing values are taken as false. |
| select | expression, indicating columns to select from a data frame. |
| drop | passed on to [ indexing operator. |
| ... | further arguments to be passed to or from other methods. |

**Details**

This is a generic function, with methods supplied for matrices, data frames and vectors (including lists). Packages and users can add further methods.

For ordinary vectors, the result is simply x[subset & !is.na(subset)].

For data frames, the subset argument works on the rows. Note that subset will be evaluated in the data frame, so columns can be referred to (by name) as variables in the expression (see the examples).

The select argument exists only for the methods for data frames and matrices. It works by first replacing column names in the selection expression with the corresponding column numbers in the data frame and then using the resulting integer vector to index the columns. This allows the use of the standard indexing conventions so that for example ranges of columns can be specified easily, or single columns can be dropped (see the examples).

The drop argument is passed on to the indexing method for matrices and data frames: note that the default for matrices is different from that for indexing.

Factors may have empty levels after subsetting; unused levels are not automatically removed. See [droplevels](http://127.0.0.1:14695/library/base/help/droplevels) for a way to drop all unused levels from a data frame.

**Value**

An object similar to x contain just the selected elements (for a vector), rows and columns (for a matrix or data frame), and so on.

**Warning**

This is a convenience function intended for use interactively. For programming it is better to use the standard subsetting functions like [[](http://127.0.0.1:14695/library/base/help/%5B), and in particular the non-standard evaluation of argument subset can have unanticipated consequences.

**Author(s)**

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**See Also**

[[](http://127.0.0.1:14695/library/base/help/%5B), [transform](http://127.0.0.1:14695/library/base/help/transform) [droplevels](http://127.0.0.1:14695/library/base/help/droplevels)

**Examples**

subset(airquality, Temp > 80, select = c(Ozone, Temp))

subset(airquality, Day == 1, select = -Temp)

subset(airquality, select = Ozone:Wind)

with(airquality, subset(Ozone, Temp > 80))

## sometimes requiring a logical 'subset' argument is a nuisance

nm <- rownames(state.x77)

start\_with\_M <- nm %in% grep("^M", nm, value = TRUE)

subset(state.x77, start\_with\_M, Illiteracy:Murder)

# but in recent versions of R this can simply be

subset(state.x77, grepl("^M", nm), Illiteracy:Murder)