

Delimited Files

`DelimitedFiles.readlm` — Method

```
readlm(source, delim::AbstractChar, T::Type, eol::AbstractChar; header=false,
```

Read a matrix from the source where each line (separated by `eol`) gives one row, with elements separated by the given delimiter. The source can be a text file, stream or byte array. Memory mapped files can be used by passing the byte array representation of the mapped segment as source.

If `T` is a numeric type, the result is an array of that type, with any non-numeric elements as `NaN` for floating-point types, or zero. Other useful values of `T` include `String`, `AbstractString`, and `Any`.

If `header` is `true`, the first row of data will be read as header and the tuple `(data_cells, header_cells)` is returned instead of only `data_cells`.

Specifying `skipstart` will ignore the corresponding number of initial lines from the input.

If `skipblanks` is `true`, blank lines in the input will be ignored.

If `use_mmap` is `true`, the file specified by `source` is memory mapped for potential speedups. Default is `true` except on Windows. On Windows, you may want to specify `true` if the file is large, and is only read once and not written to.

If `quotes` is `true`, columns enclosed within double-quote (") characters are allowed to contain new lines and column delimiters. Double-quote characters within a quoted field must be escaped with another double-quote. Specifying `dims` as a tuple of the expected rows and columns (including header, if any) may speed up reading of large files. If `comments` is `true`, lines beginning with `comment_char` and text following `comment_char` in any line are ignored.

Examples

```
julia> using DelimitedFiles

julia> x = [1; 2; 3; 4];

julia> y = [5; 6; 7; 8];
```

```
julia> open("delim_file.txt", "w") do io
    writedlm(io, [x y])
end

julia> readldm("delim_file.txt", '\t', Int, '\n')
4×2 Array{Int64,2}:
 1  5
 2  6
 3  7
 4  8

julia> rm("delim_file.txt")
```

`DelimitedFiles.readldm` — Method

```
readldm(source, delim::AbstractChar, eol::AbstractChar; options...)
```

If all data is numeric, the result will be a numeric array. If some elements cannot be parsed as numbers, a heterogeneous array of numbers and strings is returned.

`DelimitedFiles.readldm` — Method

```
readldm(source, delim::AbstractChar, T::Type; options...)
```

The end of line delimiter is taken as `\n`.

Examples

```
julia> using DelimitedFiles

julia> x = [1; 2; 3; 4];

julia> y = [1.1; 2.2; 3.3; 4.4];

julia> open("delim_file.txt", "w") do io
    writedlm(io, [x y], ',')
end;
```

```
julia> readlm("delim_file.txt", ',', Float64)
4×2 Array{Float64,2}:
 1.0  1.1
 2.0  2.2
 3.0  3.3
 4.0  4.4

julia> rm("delim_file.txt")
```

DelimitedFiles.readlm — Method

```
readlm(source, delim::AbstractChar; options...)
```

The end of line delimiter is taken as `\n`. If all data is numeric, the result will be a numeric array. If some elements cannot be parsed as numbers, a heterogeneous array of numbers and strings is returned.

Examples

```
julia> using DelimitedFiles

julia> x = [1; 2; 3; 4];

julia> y = [1.1; 2.2; 3.3; 4.4];

julia> open("delim_file.txt", "w") do io
    writelmln(io, [x y], ',')
end;

julia> readlm("delim_file.txt", ',')
4×2 Array{Float64,2}:
 1.0  1.1
 2.0  2.2
 3.0  3.3
 4.0  4.4

julia> z = ["a"; "b"; "c"; "d"];

julia> open("delim_file.txt", "w") do io
    writelmln(io, [x z], ',')
end;
```

```
julia> readlm("delim_file.txt", ',',')
4×2 Array{Any,2}:
 1  "a"
 2  "b"
 3  "c"
 4  "d"

julia> rm("delim_file.txt")
```

DelimitedFiles.readlm — Method

```
readlm(source, T::Type; options...)
```

The columns are assumed to be separated by one or more whitespaces. The end of line delimiter is taken as `\n`.

Examples

```
julia> using DelimitedFiles

julia> x = [1; 2; 3; 4];

julia> y = [5; 6; 7; 8];

julia> open("delim_file.txt", "w") do io
    writedlm(io, [x y])
end;

julia> readlm("delim_file.txt", Int64)
4×2 Array{Int64,2}:
 1  5
 2  6
 3  7
 4  8

julia> readlm("delim_file.txt", Float64)
4×2 Array{Float64,2}:
 1.0  5.0
 2.0  6.0
 3.0  7.0
 4.0  8.0
```

```
julia> rm("delim_file.txt")
```

DelimitedFiles.readlm — Method

```
readlm(source; options...)
```

The columns are assumed to be separated by one or more whitespaces. The end of line delimiter is taken as `\n`. If all data is numeric, the result will be a numeric array. If some elements cannot be parsed as numbers, a heterogeneous array of numbers and strings is returned.

Examples

```
julia> using DelimitedFiles

julia> x = [1; 2; 3; 4];

julia> y = ["a"; "b"; "c"; "d"];

julia> open("delim_file.txt", "w") do io
           writelml(io, [x y])
       end;

julia> readlm("delim_file.txt")
4×2 Array{Any,2}:
 1  "a"
 2  "b"
 3  "c"
 4  "d"

julia> rm("delim_file.txt")
```

DelimitedFiles.writelml — Function

```
writelml(f, A, delim='\t'; opts)
```

Write `A` (a vector, matrix, or an iterable collection of iterable rows) as text to `f` (either a filename string or an I/O stream) using the given delimiter `delim` (which defaults to tab, but can be any printable Julia object, typically a `Char` or `AbstractString`).

For example, two vectors x and y of the same length can be written as two columns of tab-delimited text to f by either `writedlm(f, [x y])` or by `writedlm(f, zip(x, y))`.

Examples

```
julia> using DelimitedFiles

julia> x = [1; 2; 3; 4];

julia> y = [5; 6; 7; 8];

julia> open("delim_file.txt", "w") do io
           writedlm(io, [x y])
       end

julia> readdlm("delim_file.txt", '\t', Int, '\n')
4×2 Array{Int64,2}:
 1  5
 2  6
 3  7
 4  8

julia> rm("delim_file.txt")
```