

The setspace Package*

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2022/12/04

Usage:

```
\documentclass[...]{...}  
\usepackage{setspace}
```

This package (originally based on the `doublespace` L^AT_EX 2.09 style option (package), created by Stephen Page) provides commands and environments for doing double and one-and-a-half spacing based on the font size.

Single spacing is the default.

The commands `\singlespacing`, `\onehalfspacing`, and `\doublespacing`, are for use in the preamble to set the overall spacing for the document. If a different spacing is required then the `\setstretch{baselinestretch}` command can be used in the preamble to set the `baselinestretch` appropriately. The default spacing with this style option is single spacing.

Three environments, `singlespace`, `onehalfspace`, and `doublespace`, allow the spacing to be changed within the document. Both the `onehalfspace` and `doublespace` environments are intended to increase the spacing, so the `onehalfspace` environment should not be used in a double spaced document.

If an increased spacing different from one-and-a-half or double spacing is required then the `spacing` environment can be used. The `spacing` environment takes one argument which is the larger `baselinestretch` to use, e.g., `\begin{spacing}{2.5}`.

`\footins` is adjusted in the same way as `\parskip`.

*Currently maintained by David Carlisle and others at <https://github.com/latex-package-repositories/setspace/issues>

```

% \iffalse meta-comment
%
% Copyright (C) 2022 by LaTeX Team
% Copyright (C) 2011 by Robin Fairbairns (rf10@cam.ac.uk)
% Copyright (C) 2000 by Geoffrey Tobin
%
% -----
% This work may be distributed and/or modified under the
% conditions of the LaTeX Project Public License, either version 1.3
% of this license or (at your option) any later version.
% The latest version of this license is in
% http://www.latex-project.org/lppl.txt
% and version 1.3 or later is part of all distributions of LaTeX
% version 2005/12/01 or later.
%
% This work has the LPPL maintenance status 'maintained'.
%
% The Current Maintainer of this work is Robin Fairbairns
%
% This work consists of the files setspace.sty and setspace-test.tex
%
% \fi
%
% -----
% LaTeX-style-file{
% filename = "setspace.sty",
% version = "6.7b",
% date = "4 December 2022",
% supported = "yes",
% archived = "CTAN",
% keywords = "LaTeX package, line spacing",
% codetable = "ISO/ASCII",
% docstring = "setspace.sty is a LaTeX (2e) package.
% Comments and bug reports welcome!"
%
% This includes GDG's modification to Erica Harris'
% setspace.sty. The main aspects of this
% modification deal with the definitions of
% \single spacing \onehalf spacing, and
% \double spacing, (these are near the beginning of
% the file). Primarily, these deal with adding
% fontsize changes to guarantee that the new
% baseline is properly defined and placed into
% action. The extra \vskip in the definition of
% \single spacing seems to make for a cleaner
% transition from multiple spacing back to single
% spacing. These did not appear warranted for
% other size changes.
%
% Modified by GDG on November 1, 1992, to allow
% for use of New Font Selection Scheme.
%
% Modified by GDG on June 4, 1993, to correct
% for spacing tokens in definition of \setsize
% Thanks to Kaja P. Christiansen <kaja@daimi.au.dk>
% for the fix!!
%
% Modified by GDG on May 24, 1994, to change toggle
% definition from \selectfont to \newbaseline.
%
% Modified by GDG on May 25, 1994, to add
% definition of \everydisplay -- this part of
% the code was apparently written by Geoffrey
% Tobin on Thu 23 Jan 1992 and was provided by
% stanton@haas.berkeley.edu (Richard Stanton).
% This should help with some of the awkward math
% placements in changing spacings.
%
% Modified by GT on 23 Jan 1996, to correct
% \everymath bug, first reported by Mario
% Wolczko <mario@cs.man.ac.uk> on 9 June 1992.
%
% Modified by GT on 23 Jan 1996, to correct
% usage of comment characters in macro
% definitions.
%
% Modified by GT on 23 Jan 1996, to update
% (adjusted) \@xfloat definition for LaTeX2e.
% Bug report was courtesy of Kay Nettle.
%
% Modified by GT on 24 Jan 1996, to update
% (adjusted) \@footnotetext definition for
% LaTeX2e, and to add an adjusted LaTeX2e
% \@mpfootnotetext definition for minipages.
% Bug report was courtesy Kay Nettle.
%
% Changed by GT on 6 Feb 1996, into a LaTeX2e
% package.
%
% Made more package-like by GT on 14 Feb 1996,
% by adding standard messages.
%
% GT replaced \@normalsize by \normalize on 28
% Sep 1996. This change was successively
% advised by:
%
% Rowland J. Bartlett
% <R.J.Bartlett@bolton.ac.uk>
% on Tue 6 Aug 96,

```

```

%
% Ted Stern
% <stern@amath.washington.edu>
% on Wed 7 Aug 96,
%
% Michal Jaegermann
% <michal@ellspace.math.ualberta.ca>
% on Fri 27 Sep 96.
%
% GT: Sat 28 Sep 1996: Added call to
% \setspace@size in \setstretch, as suggested
% by David Hull <hull@cs.uiuc.edu>
% on Wed 24 July 1996.
%
% GT: Sat 28 Sep 1996: Pared \setspace@size
% mercilessly down to \currsize, following
% advice given on Fri 27 Sep 1996 by Michal
% Jaegermann <michal@ellspace.math.ualberta.ca>.
% Retained this macro for flexibility.
%
% Code rearranged by GT, Sat 28 Sep 1996, to give
% greater prominence to \setstretch.
%
% Also, GT changed (Sat 28 Sep 1996) many
% occurrences of \def to \newcommand,
% \renewcommand, or \newenvironment,
% as seemed appropriate.
%
% GT, Tue 10 Dec 1996: Following a suggestion
% by Ted Stern, the 'single' spacing is now
% settable by the user. This is for slightly
% large fonts such as Lucida Bright.
%
% GT, Wed 11 Dec 1996: For simplicity and
% maintainability, call \onehalfspacing in
% the onehalfspace environment, and
% \doublespacing in the double space
% environment.
%
% GT, Wed 11 Dec 1996: Also deleted
% \setspace@size from \setstretch,
% as \currsize suffices.
%
% Modified by Brett Presnell (BP)
% <presnell@maths.anu.edu.au> on 21 Mar 1998
% to add nodisplayskipstretch option, which
% turns off the stretching of the space
% before and after displays, which is often
% excessive, particularly with double spaced
% documents. Also added the
% setdisplayskipstretch command, which allows
% the user to choose by how much to stretch
% the space before and after displays
% independently from the setting of
% baselinestretch. This works regardless of
% whether the nodisplayskipstretch option is
% in effect.
%
% GT, Wed 15 Apr 1998: Added the singlespace*
% environment requested by
% Mark Olesen <olesen@veber.me.queensu.ca>
% on Sat 24 May 1997 and Wed 18 June 1997.
% This is reported to give improved vertical
% spacing around itemize and quote environments.
%
% GT, Wed 15 Apr 1998: David Hull pointed out on
% Fri 12 Dec 1997 that the \belowdisplayskip line
% in the \everydisplay was mistyped. Now fixed.
%
% GT, Thu 26 Nov 1998: Finally got round to
% fixing the absence of \begingroup from
% onehalfspace and double space environments.
% Thanks to: Bernd Schandl, Ron Smith,
% Himanshu Gohel, and Kevin Ruland, for bringing
% it to my long overdue attention.
%
% GT, Tue 27 July 1999: On Saturday 24 July
% 1999, Alexander L. Wolf <alw@cs.colorado.edu>
% informed me that the \double space and
% \onehalfspace _macros_ are still at fault.
%
% GT, Fri 3 March 2000: Today Stefano
% Lacaparra of Italy brought my attention to
% the need to extend the commands and macros
% to point sizes other than 10, 11 and 12.
% Since there's no general formula for the
% line stretch values in terms of point size,
% and they vary only slightly between 10, 11
% and 12 pt, and furthermore the values were
% presumably optimised specifically for the
% Computer Modern fonts, I've chosen to use
% the 10 pt values as the generic defaults.
%
% GT, Fri 1 December 2000: George Pearson
% requested package options for the three
% common spacings.
%
% DPC Guard against \@ptsiz not being defined
% https://github.com/rf-latex/setspace/issues/5

```

```

%%
%% }
%%
%%-----
%% FILE:  setspace.sty in SYS2.TEX.PUB.ISULATEX.STYLES
%% AUTHOR: Erica M. S. Harris
%% DATE:   April 1990
%% MOD:    March 1991
%%
%% Update to LaTeX (2e) : 6 Feb 1996.
%% Description: LaTeX Document Package "setspace"
%%
%% Usage:
%%      \documentclass[...]{...}
%%      \usepackage{setspace}
%%
%% Based on the doublespace option created by Stephen Page.
%%
%% This style option provides commands and environments for doing
%% double and one-and-a-half spacing based on pt size.
%%
%% Single spacing is the default.
%%
%% Three commands, \singleline, \onehalfspacing, and
%% \doublespace, are for use in the preamble to set the overall
%% spacing for the document. If a different spacing is required then
%% the \setstretch{baselinestretch} command can be used in the
%% preamble to set the baselinestretch appropriately. The default
%% spacing with this style option is single spacing.
%%
%% Three environments, singlespace, onehalfspace, and doublespace,
%% allow the spacing to be changed within the document. Both the
%% onehalfspace and doublespace environments are intended to increase
%% the spacing, so the onehalfspace environment should not be used in
%% a double spaced document. If an increased spacing different from
%% one-and-a-half or double spacing is required then the spacing
%% environment can be used. The spacing environment takes one
%% argument which is the larger baselinestretch to use,
%% e.g., \begin{spacing}{2.5}.
%%
%% \footins is adjusted the same as \parskip - appears to work. Lose
%% stretch parts but don't consider that to be crucial
%%
%% Removed code for altering spacing before and after displayed
%% equations - just looked too much.
%%
%% MODS:
%% Redefinition of \spacing and \endspacing for consistency with
%% TeX 3.x inserted by George Greenwade. Modification provided by
%% Philip Ross (ROSS@UK.AC.ABDW.BIOMED) and John Byrne via INFO-TeX.
%%
%% PLEASE REPORT ANY BUGS
%%
%% Old Documentation follows:
%% 1. A new environment "singlespace" is provided, within which single
%%    spacing will apply.
%%    JFL - changed so that it works in regular text and so that
%%    vertical space before and after is correctly computed
%% 2. Double spacing is turned off within footnotes and floats (figures
%%    and tables).
%% 3. Proper double spacing happens below tabular environments and in
%%    other places where LaTeX uses a strut.
%% 4. Slightly more space is inserted before footnotes.
%% 5. JFL - fixes spacing before and after displayed math
%%
%% mods:  Jean-Francois Lamy
%%        lamy@ai.toronto.edu
%%        lamy@utai.uucp
%%
%% POSSIBLE BUGS:
%% . Increasing struts may possibly cause some other obscure part of
%%   formatting to fall over.
%% . \begin{singlespace}\begin{quote} produces the wrong spacing before
%%   the quote (extra glue is inserted).
%%
%%-----
\ifundefined{NeedsTeXFormat}{% 2.09 version
\def \filename {setspace.sty}
\def \filedate {2022/12/04}
\def \fileversion {6.7b}
\typeout {Package: 'setspace' \fileversion\space <\filedate>}
}% 2e version
\NeedsTeXFormat {LaTeX2e}[1994/12/01]
\ProvidesPackage {setspace}[2022/12/04 v6.7b set line spacing]
}

% BP: add nodisplayskipstretch option and \setdisplayskipstretch command.

\newcommand{\displayskipstretch}{\baselinestretch}
\newcommand{\setdisplayskipstretch}[1]{\renewcommand{\displayskipstretch}{#1}}
\DeclareOption{nodisplayskipstretch}{\setdisplayskipstretch{1.0}}

% GT: add George Pearsons' suggested options.

\DeclareOption{singlespacing}{\AtEndOfPackage{\singleline}}
\DeclareOption{onehalfspacing}{\AtEndOfPackage{\onehalfspacing}}
\DeclareOption{doublespacing}{\AtEndOfPackage{\doublespace}}

\ProcessOptions

```

```

% GT: Sat 28 Sep 1996: Widely using \newcommand, \renewcommand, and
% \newenvironment, instead of \def.

% ** Line space commands.

\newcommand{\setstretch}[1]{%
\def\baselinestretch{#1}%
\currsize
}

% GT: Sat 28 Sep 1996: spacing commands and environments modified to
% use \setstretch instead of \baselinestretch.
%
% GT: Sat 28 Sep 1996: No, I don't know understand the line spacing
% algorithms! If someone (LaTeX team) can enlighten me as to the
% general rule, please do! It would be very pleasant if setspace.sty
% were suited for document font sizes other than 10, 11 and 12 pt.
%
% GT: Tue 10 Dec 1996: Instead of fixing singlespacing to exact unity,
% allow user to redefine it (only slightly, please!) from its initial
% value of unity, in the case when a particular font is slightly larger
% or slightly smaller than its point size would indicate. This change
% affects setspace's single spacing commands, and LaTeX's footnote and
% float environments. The one and a half, double, and arbitrary
% spacing commands are unaltered.

\newcommand{\SetSingleSpace}[1]{%
\def\setspace@singlespace{#1}%
}

% Here's the default single line spacing value.
\SetSingleSpace{1}

\newcommand{\singleline}{%
\setstretch{\setspace@singlespace}% normally 1
\vskip \baselineskip % Correction for coming into singlespace
}

\newcommand{\onehalfspacing}{%
\setstretch{1.25}% default
% DPC 6.7b guard \@ptsize
\ifx\@ptsize\undefined\else
\ifcase \@ptsize \relax % 10pt
\setstretch {1.25}%
\or % 11pt
\setstretch {1.213}%
\or % 12pt
\setstretch {1.241}%
\fi
\fi
}

\newcommand{\doublespace}{%
\setstretch{1.667}% default
% DPC 6.7b guard \@ptsize
\ifx\@ptsize\undefined\else
\ifcase \@ptsize \relax % 10pt
\setstretch {1.667}%
\or % 11pt
\setstretch {1.618}%
\or % 12pt
\setstretch {1.655}%
\fi
\fi
}

% ** Modification of the LaTeX command \@setsize.

%---Stretch the baseline BEFORE calculating the strut size. This improves
% spacing below tabular environments etc., probably...
% Comments are welcomed.

% GT: Sun 29 Sep 1996: Question: Is this code anywhere near correct
% since this part of LaTeX (in, eg, latex.ltr) has been greatly changed?

% GT: Sun 29 Sep 1996: The meanings of the arguments to \@setsize
% appear to be (whatever these may signify) :
% current size; font baselineskip; ignored (!); and font size.

% GT: Sun 29 Sep 1996: Note that \@setsize (in latest LaTeX,
% \@setfontsize, which is called by \@setsize) seems to be the only
% place in purely modern LaTeX where \currsize is set, and ltxguide.cls
% seems to be the only file in the LaTeX base distribution that uses it!

% RF: 2011-12-19: only redefine \@setsize if under 2e; there have been
% reports of ltx209 packages failing when run with setspace under
% ltx2e, with this definition
\ifundefined{NeedsTeXFormat}{%
\def\@setsize#1#2#3#4{%
% Modified 1993.04.07--CDG per KPC
\@nomath#1%
\let\currsize#1%
\baselineskip #2%
\baselineskip \baselinestretch\baselineskip
\parskip \baselinestretch\parskip
\setbox\strutbox \hbox{%
\vrule height.7\baselineskip
depth.3\baselineskip
}
}
}

```

```

width{x}%
\skip\footins\baselinestretch\skip\footins
\normalbaselineskip\baselineskip#3#4%
}{%

% ** Float and footnote adjustments to compensate for a change in the
% ** main text's line spacing.

%---Increase the space between last line of text and footnote rule.
\skip\footins 20pt plus4pt minus4pt

%---Reset baselinestretch within floats and footnotes.

% GT: Tue 23 Jan 1996: This is where the conflict with the combination
% of the color package and the figure environment used to occur.

% Floats.

% GT: Sat 28 Sep 1996: \xfloat is the only place where \normalsize
% is still used in setspace.sty !

\let\latexxfloat=\xfloat
\def\xfloat #1[#2]{%
  \latexxfloat #1[#2]%
  \def\baselinestretch{\setspace@singlespace}%
  \normalsize
}

% GT: Wed 24 Jan 1996: This footnote code was copied from LaTeX and
% modified rather naively. It had to be brought up to date, not only
% because of LaTeX's new color ability, but also because there had
% been major changes to this code in LaTeX at least as far back as
% March 1992.

% Normal, bottom of the page, footnotes.
%
% GT: Based HEAVILY on original LaTeX (2e) code. A standard hook would
% be MUCH preferred, so that LaTeX's footnote implementation needn't be
% copied each time it changes.
%
% GT: The \protected\def requires at least the December 1994 LaTeX.
% This is precisely the kind of VERSION DEPENDENCY situation that
% cannot (AFAIK) be avoided, because LaTeX (2e) LACKS appropriate
% standard hooks and/or context markers.

\long\def\footnotetext#1{%
  \insert\footins%
% GT: Next line added. Hook desired here!
  \def\baselinestretch {\setspace@singlespace}%
  \reset@font\footnotesize
  \interlinepenalty\interfootnotelinepenalty
  \splittopskip\footnotesep
  \splitmaxdepth \dp\strutbox \floatingpenalty \@MM
  \hsize\columnwidth
  \parboxrestore
% DPC 6.7b added from latex.ltx
  \def\currentcounter{footnote}%
  \protected\def\currentlabel{%
    \cname p#footnote\endcsname\@thefnmark
  }%
  \color@begingroup
  \makefnintext{%
    \rule{z@footnotesep\ignorespaces#1\@finalstrut\strutbox}%
% DPC 6.7b added from latex.ltx
  \par
  \color@endgroup}}

% Minipage footnotes.

\long\def\mpfootnotetext#1{%
  \global\setbox\mpfootins\vbbox%
  \unvbox \mpfootins
% GT: Next line added. Hook desired here!
  \def\baselinestretch {\setspace@singlespace}%
  \reset@font\footnotesize
  \hsize\columnwidth
  \parboxrestore
% DPC 6.7b added from latex.ltx
  \def\currentcounter{mpfootnote}%
  \protected\def\currentlabel{%
    \cname p#mpfootnote\endcsname\@thefnmark}%
  \color@begingroup
  \makefnintext{%
    \rule{z@footnotesep\ignorespaces#1\@finalstrut\strutbox}%
% DPC 6.7b added from latex.ltx
  \par
  \color@endgroup}}

% ** Line space environments.

% A single spaced quote (say) is done by surrounding singlespace with quote.

\newenvironment{singlespace}{%
  \vskip \baselineskip
  \setstretch {\setspace@singlespace}%
  \vskip -\baselineskip
}{%
  \par
}

```

```

% GT (c/o Mark Olesen), Wed 15 April 1998.

\newenvironment{singlespace*}{%
  \setstretch {\setspace@singlespace}%
  \vskip -\baselineskip
}{%
  \vskip -0.5\baselineskip
}

% spacing, doublespace and onefhalfspace all are meant to INCREASE the
% spacing (i.e. calling onefhalfspace from within doublespace will not
% produce a graceful transition between spacings)
%
% Next two definitions fixed for consistency with TeX 3.x

% In order to use \newenvironment, while easily using same code for
% end of each environment, the code that used to be in \endspacing has
% been moved into a new (but internal) macro, \restore@spacing.

\newcommand{\restore@spacing}{%
  \par
  \vskip \parskip
  \vskip \baselineskip
  \endgroup
  \vskip -\parskip
  \vskip -\baselineskip
}

\newenvironment{spacing}[1]{%
  \par
  \begingroup
  \setstretch {#1}%
}{%
  \restore@spacing
}

% one and a half spacing is 1.5 x pt size
\newenvironment{onehalfspace}{%
  \begingroup
  \onehalfspacing
}{%
  \restore@spacing
}

% double spacing is 2 x pt size
\newenvironment{doublespace}{%
  \begingroup
  \doublespacing
}{%
  \restore@spacing
}

% GT: EMSh chose to omit display math part that follows.
% She wrote (see above) that the "altered spacing before and after displayed
% equations ... just looked too much".
%
% Fix up spacing before and after displayed math
% (arraystretch seems to do a fine job for inside LaTeX displayed math,
% since array and eqarray seem to be affected as expected).
% Changing \baselinestretch and doing a font change also works if done here,
% but then you have to change @setsize to remove the call to @nomath
%
% GT: The \belowdisplayskip line was mistyped; now fixed, courtesy of
% David Hull.
%
% GT: Brett Parnell has addressed EMSh's concern by replacing
% \baselinestretch by \displayskipstretch in displays, as follows.

\everydisplay\expandafter{%
  \theeverydisplay
  \abovedisplayskip \displayskipstretch\abovedisplayskip
  \belowdisplayskip \displayskipstretch\belowdisplayskip
  \abovedisplayshortskip \displayskipstretch\abovedisplayshortskip
  \belowdisplayshortskip \displayskipstretch\belowdisplayshortskip
}

\endinput
%% EOP.

```