

The `nowidow` package

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1 Introduction

This package was based on the answer to a question¹ about expansion with `\begingroup` and `\foreach` asked on <http://tex.stackexchange.com>. Thanks to Martin Scharrer² for his solution.

Widows (single lines at the top of a page) and orphans (single lines at the bottom of a page) happen frequently and should be avoided.

The `\widowpenalties` and `\clubpenalties` commands allow to prevent them, but their syntax is a bit complex to use.

The `nowidow` package provides `\nowidow` and `\noclub` commands which are simpler to use in order to prevent widows and orphans.

2 Usage

To load the package, use:

```
\usepackage[<options>]{nowidow}
```

2.1 Options

`defaultlines=<value>`

The `defaultlines` option sets the default minimal number of lines to be kept after or before the page break.

`all`

The `all` option sets the widow and orphan penalties for the whole document upon loading the package, for example:

```
\usepackage[defaultlines=4,all]{nowidow}
```

¹<http://tex.stackexchange.com/questions/26272/expansion-issue-with-begingroup-and-foreach/26275#26275>

²<http://tex.stackexchange.com/users/2975/martin-scharrer>

2.2 Commands

`\nowidow`

To prevent widows in a paragraph, call `\nowidow` immediatly at the end of the paragraph (without an empty line), optionally followed by the minimal number of lines you want after the page break:

```
This paragraph overflows to the next page,  
but I really don't want any widows in it.  
\nowidow[3]
```

The minimal number of lines to be kept after the page break defaults to 2 if not specified or overridden by the `defaultlines` option.

`\setnowidow`

This macro is similar to `\nowidow` but sets the widow penalty for the whole document instead of the current paragraph only.

This macro is used when the package is loaded with the `all` option.

`\noclub`

This is similar to the `\nowidow` command but prevents orphans at the end of a page:

```
This paragraph overflows to the next page,  
but I really don't want any orphans in it.  
\noclub[3]
```

The minimal number of lines to be kept before the page break defaults to 2 if not specified or overridden by the `defaultlines` option.

`\setnoclub`

This macro is similar to `\noclub` but sets the orphan penalty for the whole document instead of the current paragraph only.

This macro is used when the package is loaded with the `all` option.

3 Implementation

```
1 \ProvidesPackage{nowidow}
```

Options

```
2 \RequirePackage{kvoptions}  
3 \SetupKeyvalOptions{  
4   family=nowidow,  
5   prefix=nowidow@,  
6 }  
7 \DeclareStringOption[2]{defaultlines}  
8 \DeclareBoolOption{all}  
9 \ProcessKeyvalOptions*
```

```

\nowidow@X
10 \def\nowidow@X#1{%
11     \ifnum#1<\nowidowmax
12         10000
13         \expandafter\nowidow@X\expandafter{%
14             \the\numexpr(#1)+1\expandafter\relax\expandafter}%
15     \fi
16 }

\setnowidow
17 \newcommand{\setnowidow}[1][\nowidow@defaultlines]{%
18     \mathchardef\nowidowmax#1\relax
19     \widowpenalties #1 \nowidow@X{1} 0\par
20 }
21 \ifnowidow@all
22     \setnowidow
23 \fi

\nowidow
24 \newcommand{\nowidow}[1][\nowidow@defaultlines]{%
25     \beginingroup
26     \setnowidow[#1]
27     \endgroup
28 }

\setnoclub
29 \newcommand{\setnoclub}[1][\nowidow@defaultlines]{%
30     \mathchardef\nowidowmax#1\relax
31     \clubpenalties #1 \nowidow@X{1} 0\par
32 }
33 \ifnowidow@all
34     \setnoclub
35 \fi

\nocclub
36 \newcommand{\nocclub}[1][\nowidow@defaultlines]{%
37     \beginingroup
38     \setnocclub[#1]
39     \endgroup
40 }

```