The pagerange Package

Version 0.5

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February 3, 2010

1 Introduction

This package emerged from my desire to resolve page ranges in the draftmark package, but it may be useful to other (IA)T_EX enthusiasts and users.

2 Usage

When a given page range xx-yy (simple/plain characters) or \pages (control sequence, e.g., \def\pages{xx-yy}) is submitted to the macro \pagerange (e.g., \pagerange{xx-yy} or \pagerange\pages), this package splits the range as xx in the macro \pagestart and yy in \pageend. The counter equivalents of these are \prg@cnta and \prg@cntb. The control sequence containing the page range (e.g., \pages) is fully expanded before the page range is split.

If you specify a range consisting of a hyphen (or any tie) but with one or two empty page numbers, the following will happen:

- a) A range of the form "-34" is taken to mean pages defaultfirstpage to 34. The default value of defaultfirstpage is 1; it can be changed via \pagerangeoptions.
- b) A range of the form "12-" is taken to mean page 12 to defaultlastpage, where the default value of defaultlastpage is the document's last page.
- c) A range of the form "-" (i.e., only hyphen and no pages) is taken to mean from defaultfirstpage to defaultlastpage.
- d) A blank page range (i.e., containing no argument and no hyphen/tie) is taken to mean the range defaultfirstpage to defaultlastpage, or it may prompt a fatal error, depending on whether the boolean acceptempty is set true or false (respectively).

Page ranges containing more than one hyphen/tie cause fatal error.

If the upper limit of the page range is smaller than the lower limit, a fatal error is flagged.

The tie between the pages in the page range can be any single non-active character; its default is the hyphen character "-". It can be changed in the call to the package (e.g., \usepackage[tie=*]{pagerange}) or at any moment through \pagerangeoptions{tie=*}.

Because of the need for the last page of the document, at least 2 runs/passes are needed to obtain the correct last page.

This package has been tested with the hyperref package, which redefines the label used by the lastpage package.

2.1 Using an active character as the "tie"

Active characters can't, unfortunately, be used as ties. The package easily terminates with a fatal error when an active character is passed as tie. It wouldn't be safe to change the catcode of an active character submitted as tie through \pagerangeoptions, since at the time the macro \pagerangeoptions is invoked, the page may already be in the process of being built.

To use an active character (say $\tilde{}$) as a tie, it is necessary to first locally change its catcode, e.g., as follows:

```
1 \begingroup
2 \catcode'\~=11
3 \pagerangeoptions{tie=~}
4 \pagerange{1~4}
5 \endgroup
```

which gives Pages 1 to 4.

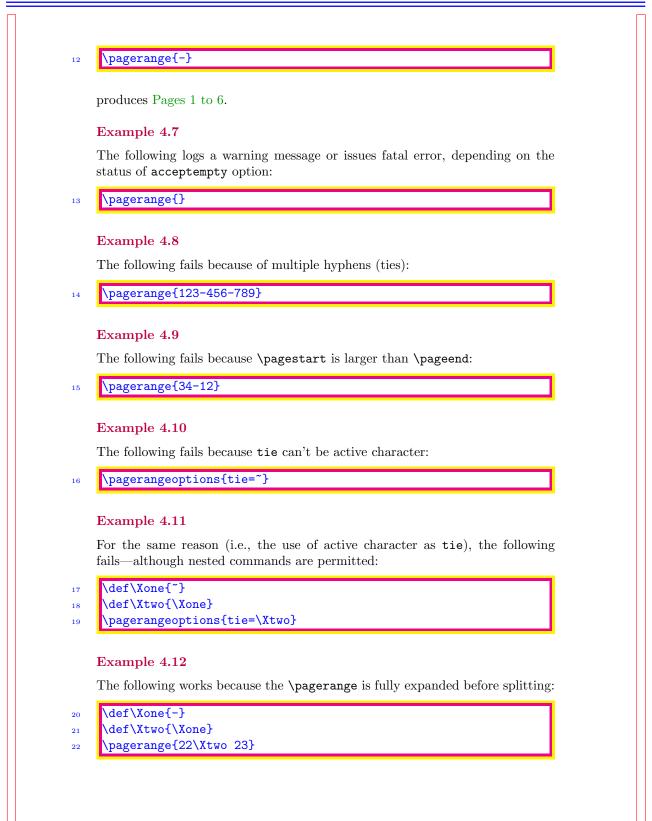
3 Package options

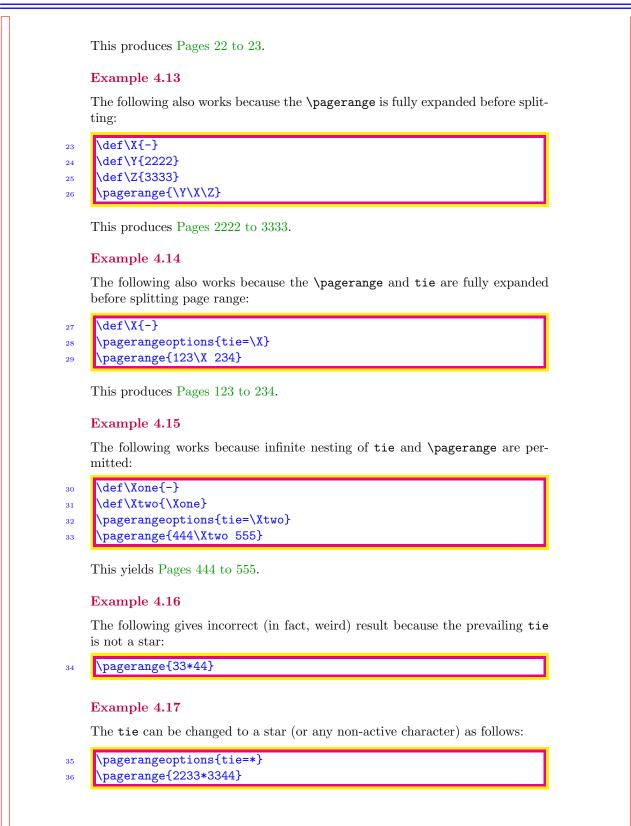
The package options are as follows:

Option	Default	Meaning	
tie	hyphen (-)	The tie that show the breakpoint for	
		the page range.	
acceptempty	false	The boolean option that specifies if	
		empty page ranges (i.e., no page num-	
		bers and no tie) submitted to the pack-	
		age should be accepted. If true, the	
		page range is assumed to be from	
		page 1 to the last page.	
defaultfirstpage	1	The default start page number, used	
		as the starting page when no starting	
		page number is specified by the user.	

	defaultlastpage	document's last page	The default last page number, used as the last page when no last page num- ber is specified by the user.
	4 Examples		
	Example 4.1 The following		
	123-45 Pages~\pagestart\		e\pageend
	produces Pages 123 to	o 456.	
	Example 4.2 The following		
3	12345-	67890}	
	produces Pages 12345	i to 67890.	
	Example 4.3		
	The following		
	123-45	67}	
	produces Pages 123 to	o 4567.	
	Example 4.4		
)	The following	1}	
,	produces Pages 600 to		
	Example 4.5	5 001.	
	The following		
1	\pagerange{-34}		
	produces Pages 1 to 3	34.	
	Example 4.6 No particular technology of the following	age numbers g	given

```
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```





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From version 0.3 of the package, it has been possible to obtain page ranges from ${\rm IaT}_{\rm E}{\rm X}$ references, e.g., as in

```
41 \label{page:label}
42 \pagerangeoptions{tie=-}
43 \let\getpage\getpagenumber
44 \pagerange{\getpage:first}-\getpage{page:last}},
```

which yields Pages 1 to 6.

The command \getpagenumber is provided in the package and may, in general, be used to convert page labels into page numbers even in expansion contexts, where \pageref will normally fail. If the page label or reference is undefined, the default start page number (defaultfirstpage) is used. The defaultfirstpage is a package option (see Section 3).