

The `uniquecounter` package

Heiko Oberdiek
<oberdiek@uni-freiburg.de>

2009/09/11 v1.0

Abstract

This package provides a kind of counter that provides unique number values. Several counter can be created by different names. The numeric values are not limited.

Contents

1	Documentation	1
1.1	Example	2
2	Implementation	2
2.1	Reload check and package identification	2
2.2	Catcodes	3
3	Test	5
3.1	Catcode checks for loading	5
3.2	Macro tests	7
3.2.1	Test with L ^A T _E X	7
3.2.2	Test with plain-T _E X	8
4	Installation	9
4.1	Download	9
4.2	Bundle installation	10
4.3	Package installation	10
4.4	Refresh file name databases	10
4.5	Some details for the interested	10
5	History	11
	[2009/09/11 v1.0]	11
6	Index	11

1 Documentation

`\UniqueCounterNew {<name>}`

Macro `\UniqueCounterNew` creates a new unique counter `<name>`. An error is thrown, if the counter already exists.

`\UniqueCounterCall {<name>} {<code>}`

Macro `\UniqueCounterCall` calls the given `<code>` with a new value of counter `<name>` as argument.

`\UniqueCounterIncrement {⟨name⟩}`

Macro `\UniqueCounterIncrement` generates a new value for the counter `⟨name⟩` by incrementing by one (globally).

`\UniqueCounterGet {⟨name⟩}`

Expandable macro `\UniqueCounterGet` returns the current value of counter `⟨name⟩`

1.1 Example

```
1 ⟨*example⟩
2 \documentclass{minimal}
3 \usepackage{uniquecounter}
4 \UniqueCounterNew{anchor}
5 \makeatletter
6 \newcommand*{\DefNewAnchorName}[2]{%
7   % #1 is unique counter value
8   % #2 is name of anchor
9   \@namedef{anchor@#2}{a#1}%
10 }
11 \newcommand*{\NewAnchorName}[1]{%
12   \UniqueCounterCall{anchor}\DefNewAnchorName{#1}%
13 }
14 \newcommand*{\PrintAnchorName}[1]{%
15   \@nameuse{anchor@#1}%
16 }
17 \begin{document}
18   \NewAnchorName{Top}%
19   \NewAnchorName{Left}%
20   \noindent
21   Top: \PrintAnchorName{Top}\\%
22   Left: \PrintAnchorName{Left}%
23 \end{document}
24 ⟨/example⟩
```

2 Implementation

```
25 ⟨*package⟩
```

2.1 Reload check and package identification

Reload check, especially if the package is not used with L^AT_EX.

```
26 \begingroup
27   \catcode44 12 % ,
28   \catcode45 12 % -
29   \catcode46 12 % .
30   \catcode58 12 % :
31   \catcode64 11 % @
32   \catcode123 1 % {
33   \catcode125 2 % }
34   \expandafter\let\expandafter\x\csname ver@uniquecounter.sty\endcsname
35   \ifx\x\relax % plain-TEX, first loading
36   \else
37     \def\empty{}%
38     \ifx\x\empty % LATEX, first loading,
39       % variable is initialized, but \ProvidesPackage not yet seen
40     \else
41       \catcode35 6 % #
42       \expandafter\ifx\csname PackageInfo\endcsname\relax
43       \def\x#1#2{%
```

```

44         \immediate\write-1{Package #1 Info: #2.}%
45     }%
46     \else
47         \def\x#1#2{\PackageInfo{#1}{#2, stopped}}%
48     \fi
49     \x{uniquecounter}{The package is already loaded}%
50     \aftergroup\endinput
51 \fi
52 \fi
53 \endgroup

```

Package identification:

```

54 \begingroup
55 \catcode35 6 % #
56 \catcode40 12 % (
57 \catcode41 12 % )
58 \catcode44 12 % ,
59 \catcode45 12 % -
60 \catcode46 12 % .
61 \catcode47 12 % /
62 \catcode58 12 % :
63 \catcode64 11 % @
64 \catcode91 12 % [
65 \catcode93 12 % ]
66 \catcode123 1 % {
67 \catcode125 2 % }
68 \expandafter\ifx\csname ProvidesPackage\endcsname\relax
69     \def\x#1#2#3[#4]{\endgroup
70         \immediate\write-1{Package: #3 #4}%
71         \xdef#1{#4}%
72     }%
73 \else
74     \def\x#1#2[#3]{\endgroup
75         #2[#{#3}]%
76         \ifx#1@undefined
77             \xdef#1{#3}%
78         \fi
79         \ifx#1\relax
80             \xdef#1{#3}%
81         \fi
82     }%
83 \fi
84 \expandafter\x\csname ver@uniquecounter.sty\endcsname
85 \ProvidesPackage{uniquecounter}%
86 [2009/09/11 v1.0 Provides unlimited unique counter (H0)]

```

2.2 Catcodes

```

87 \begingroup
88 \catcode123 1 % {
89 \catcode125 2 % }
90 \def\x{\endgroup
91     \expandafter\edef\csname uqc@AtEnd\endcsname{%
92         \catcode35 \the\catcode35\relax
93         \catcode64 \the\catcode64\relax
94         \catcode123 \the\catcode123\relax
95         \catcode125 \the\catcode125\relax
96     }%
97 }%
98 \x
99 \catcode35 6 % #
100 \catcode64 11 % @
101 \catcode123 1 % {

```

```

102 \catcode125 2 % }
103 \def\TMP@EnsureCode#1#2{%
104   \edef\uqc@AtEnd{%
105     \uqc@AtEnd
106     \catcode#1 \the\catcode#1\relax
107   }%
108   \catcode#1 #2\relax
109 }
110 \TMP@EnsureCode{33}{12}% !
111 \TMP@EnsureCode{39}{12}% '
112 \TMP@EnsureCode{42}{12}% *
113 \TMP@EnsureCode{43}{12}% +
114 \TMP@EnsureCode{46}{12}% .
115 \TMP@EnsureCode{47}{12}% /
116 \TMP@EnsureCode{61}{12}% =
117 \TMP@EnsureCode{96}{12}% `

118 \begingroup\expandafter\expandafter\expandafter\endgroup
119 \expandafter\ifx\csname RequirePackage\endcsname\relax
120   \input bigintcalc.sty\relax
121   \input infwarerr.sty\relax
122 \else
123   \RequirePackage{bigintcalc}[2007/11/11]%
124   \RequirePackage{infwarerr}[2007/09/09]%
125 \fi

\uqc@IncNum

126 \begingroup\expandafter\expandafter\expandafter\endgroup
127 \expandafter\ifx\csname numexpr\endcsname\relax
128   \def\uqc@IncNum#1{%
129     \begingroup
130       \count@=\csname uqc@cnt@#1\endcsname\relax
131       \advance\count@\@ne
132       \expandafter\xdef\csname uqc@cnt@#1\endcsname{%
133         \number\count@
134       }%
135       \ifnum\count@=2147483647 %
136         \global\expandafter\let\csname uqc@inc@#1\endcsname
137         \uqc@IncBig
138       \fi
139     \endgroup
140   }%
141 \else
142   \def\uqc@IncNum#1{%
143     \expandafter\xdef\csname uqc@cnt@#1\endcsname{%
144       \number\numexpr\csname uqc@cnt@#1\endcsname+1%
145     }%
146     \ifnum\csname uqc@cnt@#1\endcsname=2147483647 %
147       \global\expandafter\let\csname uqc@inc@#1\endcsname
148       \uqc@IncBig
149     \fi
150   }%
151 \fi

\uqc@IncBig

152 \def\uqc@IncBig#1{%
153   \expandafter\xdef\csname uqc@cnt@#1\endcsname{%
154     \expandafter\expandafter\expandafter
155     \BigIntCalcInc\csname uqc@cnt@#1\endcsname!%
156   }%
157 }

\uqc@Def

```

```

158 \begingroup\expandafter\expandafter\expandafter\endgroup
159 \expandafter\ifx\csname newcommand\endcsname\relax
160   \def\uqc@Def#1{\def#1##1}%
161 \else
162   \def\uqc@Def#1{\newcommand*{#1}[1]}%
163 \fi

```

\UniqueCounterNew

```

164 \uqc@Def\UniqueCounterNew{%
165   \expandafter\ifx\csname uqc@cnt@#1\endcsname\relax
166     \expandafter\xdef\csname uqc@cnt@#1\endcsname{0}%
167     \global\expandafter\let\csname uqc@inc@#1\endcsname\uqc@IncNum
168     \@PackageInfo{uniquecounter}{New unique counter ‘#1’}%
169   \else
170     \@PackageError{uniquecounter}{Unique counter ‘#1’ is already defined}\@ehc
171   \fi
172 }

```

\UniqueCounterIncrement

```

173 \uqc@Def\UniqueCounterIncrement{%
174   \expandafter\ifx\csname uqc@cnt@#1\endcsname\relax
175     \@PackageError{uniquecounter}{Unique counter ‘#1’ is undefined}\@ehc
176   \else
177     \csname uqc@inc@#1\endcsname{#1}%
178   \fi
179 }

```

\UniqueCounterGet

```

180 \uqc@Def\UniqueCounterGet{%
181   \csname uqc@cnt@#1\endcsname
182 }

```

\UniqueCounterCall

```

183 \uqc@Def\UniqueCounterCall{%
184   \expandafter\ifx\csname uqc@cnt@#1\endcsname\relax
185     \@PackageError{uniquecounter}{Unique counter ‘#1’ is undefined}\@ehc
186     \expandafter\uqc@Call\expandafter0%
187   \else
188     \UniqueCounterIncrement{#1}%
189     \expandafter\expandafter\expandafter\uqc@Call
190     \csname uqc@cnt@#1\endcsname\expandafter\endcsname
191   \fi
192 }

```

\uqc@Call

```

193 \long\def\uqc@Call#1#2{#2{#1}}%
194 \uqc@AtEnd
195 \</package>

```

3 Test

3.1 Catcode checks for loading

```

196 \<test1>
197 \catcode'\{=1 %
198 \catcode'\}=2 %
199 \catcode'\#=6 %
200 \catcode'\@=11 %
201 \expandafter\ifx\csname count@\endcsname\relax

```

```

202 \countdef\count@=255 %
203 \fi
204 \expandafter\ifx\csname @gobble\endcsname\relax
205 \long\def\@gobble#1{%
206 \fi
207 \expandafter\ifx\csname @firstofone\endcsname\relax
208 \long\def\@firstofone#1{#1}%
209 \fi
210 \expandafter\ifx\csname loop\endcsname\relax
211 \expandafter\@firstofone
212 \else
213 \expandafter\@gobble
214 \fi
215 {%
216 \def\loop#1\repeat{%
217 \def\body{#1}%
218 \iterate
219 }%
220 \def\iterate{%
221 \body
222 \let\next\iterate
223 \else
224 \let\next\relax
225 \fi
226 \next
227 }%
228 \let\repeat=\fi
229 }%
230 \def\RestoreCatcodes{}
231 \count@=0 %
232 \loop
233 \edef\RestoreCatcodes{%
234 \RestoreCatcodes
235 \catcode\the\count@=\the\catcode\count@\relax
236 }%
237 \ifnum\count@<255 %
238 \advance\count@ 1 %
239 \repeat
240
241 \def\RangeCatcodeInvalid#1#2{%
242 \count@=#1\relax
243 \loop
244 \catcode\count@=15 %
245 \ifnum\count@<#2\relax
246 \advance\count@ 1 %
247 \repeat
248 }
249 \expandafter\ifx\csname LoadCommand\endcsname\relax
250 \def\LoadCommand{\input uniquecounter.sty\relax}%
251 \fi
252 \def\Test{%
253 \RangeCatcodeInvalid{0}{47}%
254 \RangeCatcodeInvalid{58}{64}%
255 \RangeCatcodeInvalid{91}{96}%
256 \RangeCatcodeInvalid{123}{255}%
257 \catcode'\@=12 %
258 \catcode'\=0 %
259 \catcode'\{=1 %
260 \catcode'\}=2 %
261 \catcode'\#=6 %
262 \catcode'\[=12 %
263 \catcode'\]=12 %

```

```

264 \catcode'\%=14 %
265 \catcode'\ =10 %
266 \catcode13=5 %
267 \LoadCommand
268 \RestoreCatcodes
269 }
270 \Test
271 \csname @@end\endcsname
272 \end
273 </test1>

```

3.2 Macro tests

3.2.1 Test with L^AT_EX

```

274 <*test2>
275 \NeedsTeXFormat{LaTeX2e}
276 \nofiles
277 \documentclass{minimal}
278 \usepackage{uniquecounter}[2009/09/11]
279 \usepackage{qstest}
280 \IncludeTests{*}
281 \LogTests{log}{*}{*}
282
283 \newcommand*\CheckValue[2]{%
284   \Expect*{#2}*{\UniqueCounterGet{#1}}%
285 }
286 \newcommand*\CheckSpace[1]{%
287   \sbox0{#1}%
288   \Expect{0.0pt}*{\the\wd0}%
289 }
290
291 \begin{qstest}{creation}{creation}
292   \CheckSpace{%
293     \UniqueCounterNew{test}%
294   }%
295   \CheckValue{test}{0}%
296 \end{qstest}
297
298 \begin{qstest}{increment}{increment}
299   \CheckSpace{%
300     \UniqueCounterIncrement{test}%
301   }%
302   \CheckValue{test}{1}%
303   \makeatletter
304   \def\uqc@cnt@test{2147483645}%
305   \CheckValue{test}{2147483645}%
306   \CheckSpace{%
307     \UniqueCounterIncrement{test}%
308   }%
309   \CheckValue{test}{2147483646}%
310   \CheckSpace{%
311     \UniqueCounterIncrement{test}%
312   }%
313   \Expect{true}*{\ifx\uqc@inc\uqc@NumInc true\else false\fi}%
314   \CheckValue{test}{2147483647}%
315   \CheckSpace{%
316     \UniqueCounterIncrement{test}%
317   }%
318   \CheckValue{test}{2147483648}%
319   \CheckSpace{%
320     \UniqueCounterIncrement{test}%
321   }%

```

```

322 \CheckValue{test}{2147483649}%
323 \end{qstest}
324
325 \begin{qstest}{call}{call}
326 \def\CheckCall#1#2{%
327 \Expect{#1}{#2}%
328 }%
329 \CheckSpace{%
330 \UniqueCounterNew{foo}%
331 }%
332 \CheckValue{foo}{0}%
333 \CheckSpace{%
334 \UniqueCounterCall{foo}{\CheckCall}{1}%
335 }%
336 \CheckSpace{%
337 \UniqueCounterCall{foo}{\CheckCall}{2}%
338 }%
339 \CheckValue{foo}{2}%
340 \end{qstest}
341
342 \csname @@end\endcsname
343 \end{test2}

```

3.2.2 Test with plain-TeX

```

344 (*test3)
345 \input uniquecounter.sty\relax
346 \catcode'\@=11 %
347 \def\CheckValue#1#2{%
348 \begingroup
349 \edef\A{#2}%
350 \edef\B{\UniqueCounterGet{#1}}%
351 \ifx\A\B
352 \else
353 \@PackageError{TEST}{Failed: \A\space<> \B}\@ehc
354 \fi
355 \endgroup
356 }
357 \def\CheckSpace#1{%
358 \setbox0=\hbox{#1}%
359 \ifdim\wd0=\z@
360 \else
361 \@PackageError{TEST}{Failed: 0.0pt <> \the\wd0}\@ehc
362 \fi
363 }
364
365 \begingroup
366 \CheckSpace{%
367 \UniqueCounterNew{test}%
368 }%
369 \CheckValue{test}{0}%
370 \endgroup
371
372 \begingroup
373 \CheckSpace{%
374 \UniqueCounterIncrement{test}%
375 }%
376 \CheckValue{test}{1}%
377 \def\uqc@cnt@test{2147483645}%
378 \CheckValue{test}{2147483645}%
379 \CheckSpace{%
380 \UniqueCounterIncrement{test}%
381 }%
382 \CheckValue{test}{2147483646}%

```

```

383 \CheckSpace{%
384   \UniqueCounterIncrement{test}}%
385 }%
386 \ifx\uqc@inc\uqc@NumInc
387 \else
388   \@PackageError{TEST}{Failed: wrong inc function}\@ehc
389 \fi
390 \CheckValue{test}{2147483647}%
391 \CheckSpace{%
392   \UniqueCounterIncrement{test}}%
393 }%
394 \CheckValue{test}{2147483648}%
395 \CheckSpace{%
396   \UniqueCounterIncrement{test}}%
397 }%
398 \CheckValue{test}{2147483649}%
399 \endgroup
400 \begingroup
401   \def\CheckCall#1#2{%
402     \begingroup
403       \def\A{#1}%
404       \def\B{#2}%
405       \ifx\A\B
406       \else
407         \@PackageError{TEST}{Failed: \A\space <> \B}\@ehc
408       \fi
409     \endgroup
410   }%
411   \CheckSpace{%
412     \UniqueCounterNew{foo}}%
413   }%
414   \CheckValue{foo}{0}%
415   \CheckSpace{%
416     \UniqueCounterCall{foo}{\CheckCall}{1}}%
417   }%
418   \CheckSpace{%
419     \UniqueCounterCall{foo}{\CheckCall}{2}}%
420   }%
421   \CheckValue{foo}{2}%
422 \endgroup
423 \csname @@end\endcsname\end
424 </test3>

```

4 Installation

4.1 Download

Package. This package is available on CTAN¹:

[CTAN:macros/latex/contrib/oberdiek/uniquecounter.dtx](#) The source file.

[CTAN:macros/latex/contrib/oberdiek/uniquecounter.pdf](#) Documentation.

Bundle. All the packages of the bundle ‘oberdiek’ are also available in a TDS compliant ZIP archive. There the packages are already unpacked and the documentation files are generated. The files and directories obey the TDS standard.

[CTAN:install/macros/latex/contrib/oberdiek.tds.zip](#)

TDS refers to the standard “A Directory Structure for \TeX Files” ([CTAN:tds/tds.pdf](#)). Directories with `texmf` in their name are usually organized this way.

¹<http://ftp.ctan.org/tex-archive/>

4.2 Bundle installation

Unpacking. Unpack the `oberdiek.tds.zip` in the TDS tree (also known as `texmf` tree) of your choice. Example (linux):

```
unzip oberdiek.tds.zip -d ~/texmf
```

Script installation. Check the directory `TDS:scripts/oberdiek/` for scripts that need further installation steps. Package `attachfile2` comes with the Perl script `pdfatfi.pl` that should be installed in such a way that it can be called as `pdfatfi`. Example (linux):

```
chmod +x scripts/oberdiek/pdfatfi.pl
cp scripts/oberdiek/pdfatfi.pl /usr/local/bin/
```

4.3 Package installation

Unpacking. The `.dtx` file is a self-extracting `docstrip` archive. The files are extracted by running the `.dtx` through plain-`TEX`:

```
tex uniquecounter.dtx
```

TDS. Now the different files must be moved into the different directories in your installation TDS tree (also known as `texmf` tree):

<code>uniquecounter.sty</code>	→ <code>tex/generic/oberdiek/uniquecounter.sty</code>
<code>uniquecounter.pdf</code>	→ <code>doc/latex/oberdiek/uniquecounter.pdf</code>
<code>uniquecounter-example.tex</code>	→ <code>doc/latex/oberdiek/uniquecounter-example.tex</code>
<code>test/uniquecounter-test1.tex</code>	→ <code>doc/latex/oberdiek/test/uniquecounter-test1.tex</code>
<code>test/uniquecounter-test2.tex</code>	→ <code>doc/latex/oberdiek/test/uniquecounter-test2.tex</code>
<code>test/uniquecounter-test3.tex</code>	→ <code>doc/latex/oberdiek/test/uniquecounter-test3.tex</code>
<code>uniquecounter.dtx</code>	→ <code>source/latex/oberdiek/uniquecounter.dtx</code>

If you have a `docstrip.cfg` that configures and enables `docstrip`'s TDS installing feature, then some files can already be in the right place, see the documentation of `docstrip`.

4.4 Refresh file name databases

If your `TEX` distribution (`teTEX`, `mikTEX`, ...) relies on file name databases, you must refresh these. For example, `teTEX` users run `texhash` or `mktextlsr`.

4.5 Some details for the interested

Attached source. The PDF documentation on CTAN also includes the `.dtx` source file. It can be extracted by AcrobatReader 6 or higher. Another option is `pdftk`, e.g. unpack the file into the current directory:

```
pdftk uniquecounter.pdf unpack_files output .
```

Unpacking with `LATEX`. The `.dtx` chooses its action depending on the format:

plain-`TEX`: Run `docstrip` and extract the files.

`LATEX`: Generate the documentation.

If you insist on using `LATEX` for `docstrip` (really, `docstrip` does not need `LATEX`), then inform the autodetect routine about your intention:

```
latex \let\install=y\input{uniquecounter.dtx}
```

Do not forget to quote the argument according to the demands of your shell.

Generating the documentation. You can use both the `.dtx` or the `.drv` to generate the documentation. The process can be configured by the configuration file `ltxdoc.cfg`. For instance, put this line into this file, if you want to have A4 as paper format:

```
\PassOptionsToClass{a4paper}{article}
```

An example follows how to generate the documentation with pdfL^AT_EX:

```
pdflatex uniquecounter.dtx
makeindex -s gind.ist uniquecounter.idx
pdflatex uniquecounter.dtx
makeindex -s gind.ist uniquecounter.idx
pdflatex uniquecounter.dtx
```

5 History

[2009/09/11 v1.0]

- First public version.

6 Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

Symbols		C	
\#	199, 261	\catcode	27, 28, 29, 30, 31, 32, 33, 41, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 88, 89, 92, 93, 94, 95, 99, 100, 101, 102, 106, 108, 197, 198, 199, 200, 235, 244, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 346
\%	264	\CheckCall	326, 334, 337, 401, 416, 419
\@	200, 257, 346	\CheckSpace	286, 292, 299, 306, 310, 315, 319, 329, 333, 336, 357, 366, 373, 379, 383, 391, 395, 411, 415, 418
\@PackageError	170, 175, 185, 353, 361, 388, 407	\CheckValue	283, 295, 302, 305, 309, 314, 318, 322, 332, 339, 347, 369, 376, 378, 382, 390, 394, 398, 414, 421
\@PackageInfo	168	\count@	130, 131, 133, 135, 202, 231, 235, 237, 238, 242, 244, 245, 246
\@ehc	170, 175, 185, 353, 361, 388, 407	\countdef	202
\@firstofone	208, 211	\csname	34, 42, 68, 84, 91, 119, 127, 130, 132, 136, 143, 144, 146, 147, 153, 155, 159, 165, 166, 167, 174, 177, 181, 184, 190, 201, 204, 207, 210, 249, 271, 342, 423
\@gobble	205, 213		
\@namedef	9		
\@nameuse	15		
\@ne	131		
\@undefined	76		
\[262		
\]	21, 258		
\{	197, 259		
\}	198, 260		
\]	263		
_	265		
A		D	
\A	349, 351, 353, 403, 405, 407	\DefNewAnchorName	6, 12
\advance	131, 238, 246	\documentclass	2, 277
\aftergroup	50		
B		E	
\B	350, 351, 353, 404, 405, 407	\empty	37, 38
\begin	17, 291, 298, 325	\end	23, 272, 296, 323, 340, 423
\BigIntCalcInc	155		
\body	217, 221		

<code>\endcsname</code>	34, 42, 68, 84, 91, 119, 127, 130, 132, 136, 143, 144, 146, 147, 153, 155, 159, 165, 166, 167, 174, 177, 181, 184, 190, 201, 204, 207, 210, 249, 271, 342, 423
<code>\endingput</code>	50
<code>\Expect</code>	284, 288, 313, 327
H	
<code>\hbox</code>	358
I	
<code>\ifdim</code>	359
<code>\ifnum</code>	135, 146, 237, 245
<code>\ifx</code>	35, 38, 42, 68, 76, 79, 119, 127, 159, 165, 174, 184, 201, 204, 207, 210, 249, 313, 351, 386, 405
<code>\immediate</code>	44, 70
<code>\IncludeTests</code>	280
<code>\input</code>	120, 121, 250, 345
<code>\iterate</code>	218, 220, 222
L	
<code>\LoadCommand</code>	250, 267
<code>\LogTests</code>	281
<code>\loop</code>	216, 232, 243
M	
<code>\makeatletter</code>	5, 303
N	
<code>\NeedsTeXFormat</code>	275
<code>\NewAnchorName</code>	11, 18, 19
<code>\newcommand</code>	6, 11, 14, 162, 283, 286
<code>\next</code>	222, 224, 226
<code>\nofiles</code>	276
<code>\noindent</code>	20
<code>\number</code>	133, 144
<code>\numexpr</code>	144
P	
<code>\PackageInfo</code>	47
<code>\PrintAnchorName</code>	14, 21, 22
<code>\ProvidesPackage</code>	39, 85
R	
<code>\RangeCatcodeInvalid</code>	241, 253, 254, 255, 256
<code>\repeat</code>	216, 228, 239, 247
<code>\RequirePackage</code>	123, 124
<code>\RestoreCatcodes</code>	230, 233, 234, 268
S	
<code>\sbox</code>	287
<code>\setbox</code>	358
<code>\space</code>	353, 407
T	
<code>\Test</code>	252, 270
<code>\the</code>	92, 93, 94, 95, 106, 235, 288, 361
<code>\TMP@EnsureCode</code>	103, 110, 111, 112, 113, 114, 115, 116, 117
U	
<code>\UniqueCounterCall</code>	1, 12, 183, 334, 337, 416, 419
<code>\UniqueCounterGet</code>	2, 180, 284, 350
<code>\UniqueCounterIncrement</code>	2, 173, 188, 300, 307, 311, 316, 320, 374, 380, 384, 392, 396
<code>\UniqueCounterNew</code>	1, 4, 164, 293, 330, 367, 412
<code>\uqc@AtEnd</code>	104, 105, 194
<code>\uqc@Call</code>	186, 189, 193
<code>\uqc@cnt@test</code>	304, 377
<code>\uqc@Def</code>	158, 164, 173, 180, 183
<code>\uqc@inc</code>	313, 386
<code>\uqc@IncBig</code>	137, 148, 152
<code>\uqc@IncNum</code>	126, 167
<code>\uqc@NumInc</code>	313, 386
<code>\usepackage</code>	3, 278, 279
W	
<code>\wd</code>	288, 359, 361
<code>\write</code>	44, 70
X	
<code>\x</code>	34, 35, 38, 43, 47, 49, 69, 74, 84, 90, 98
Z	
<code>\z@</code>	359