

xparse cheatsheet

Erwann Rogard*

May 13, 2018

Abstract

`\NewDocumentCommand` is the new `\newcommand`. Some examples.

`\NewDocumentCommand` `\NewDocumentCommand{<token>}{<pars>}{<code>}` makes `<token>` a command whose arguments, `<args>`, must conform to `<pars>`. If applicable, `<token><args>` expands to `<code>` with `#1`, `#2`, `#3` etc. replaced by `<args>`.

Program 1 Hello World!

Input

```
\NewDocumentCommand{\foo}{m}{Hello~#1!}  
\foo{World}
```

Output

Hello World!

Table 1: Mandatory arguments

	Input	Output
<code><par></code>	<code><token><arg></code>	
<code>l</code>	<code>\foo World{~Garbage}</code>	Hello World! Garbage
<code>m</code>	<code>\foo{World}</code>	Hello World!
	<code>\foo W{orld}</code>	Hello W!orld
<code>+m</code>	<code>\foo{World\par...}</code>	Hello World...!
<code>r<]</code>	<code>\foo</code>	! Failed to find ...
	<code>\foo<World]</code>	Hello World!
<code>R<]{World}</code>	<code>\foo</code>	! Failed to find ...
	<code>\foo<Universe]</code>	Hello Universe!
<code>u{ }</code>	<code>\foo</code>	! Forbidden control sequence
	<code>\foo World </code>	Hello World!
<code>v</code>	<code>\foo World </code>	Hello World!

Same `<code>` as Program 1

*firstname dot lastname AusTria gmail dot com

Table 2: Optional arguments
Output

Input	$\langle token \rangle \langle arg \rangle$	
$\langle par \rangle$	$\langle token \rangle \langle arg \rangle$	
d<>	\foo	Hello -NoValue!
	\foo<World>	Hello World!
D<>{Universe}	\foo	Hello Universe!
	\foo<World>	Hello World!
e{ }	\foo	Hello -NoValue!
	\foo_{World}	Hello World!
E{ }{Universe}	\foo	Hello -NoValue!
	\foo_{World}	Hello World!
g	\foo	Hello -NoValue!
	\foo{World}	Hello World!
G{Universe}	\foo	Hello Universe!
	\foo{World}	Hello World!
o	\foo	Hello -NoValue!
	\foo[World]	Hello World!
O{Universe}	\foo	Hello Universe!
	\foo[World]	Hello World!

Same $\langle code \rangle$ as Program 1

Table 3: Optional characters

Input	$\langle token \rangle \langle arg \rangle$	Output
$\langle par \rangle$	$\langle token \rangle \langle arg \rangle$	
s	\foo	Hello Universe!
	\foo*	Hello World!
t+	\foo	Hello Universe!
	\foo+	Hello World!

Assumes the same $\langle code \rangle$ as Program 2

Program 2 Hello World!

Input

```
\NewDocumentCommand{\foo}{s}{Hello~\IfBooleanTF{#1}{World}{Universe}!}  
\foo\\  
\foo*
```

Output

```
Hello Universe!  
Hello World!
```

List of macros

```
\RenewNewDocumentCommand  
\RenewDocumentCommand  
\ProvideDocumentCommand  
\DeclareDocumentCommand  
\NewDocumentEnvironment  
\RenewDocumentEnvironment  
\ProvideDocumentEnvironment  
\DeclareDocumentEnvironment  
\NewExpandableDocumentCommand  
\RenewExpandableDocumentCommand  
\ProvideExpandableDocumentCommand  
\DeclareExpandableDocumentCommand  
\IfNoValue(TF)  
\IfValue(TF)  
\IfBoolean(TF)
```

Acknowledgment

Thanks to latex.org for its invaluable help

Change log

References

- [1] The L^AT_EX3 Project Team *l3packages* <http://mirror.ctan.org/macros/latex/contrib/l3packages/>