prettytok — Pretty-print token lists[*]

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Abstract

Pretty-print token lists to HTML file for debugging purposes. Open the file in any browser to view the result.

Can be used to replace `\tl_analysis_show:n`.

1 Usage

1.1 Main function

`\pretty:n`
`\pretty:(x|o|V)`

`\pretty:n {⟨token list⟩}`

Print the content of ⟨*token list*⟩.

`\pretty:N`
`\pretty:c`

`\pretty:N ⟨token⟩`
`\pretty:c {⟨control sequence name⟩}`

Print ⟨*token*⟩.

This function is not very useful. Usually it's preferable to use `\pretty:V` to print a token list variable's value, or `\prettyshow:N` to print a control sequence's meaning.

`\prettyinit:`

`\prettyinit:`

Do necessary initialization.

This should be called right after the package is loaded, after setting the configuration variables described below.

1.2 Expandable interface (LuaTeX only)

`\prettyinit:` must be called before calling the functions in this section.

`\prettye:n` ⋆

`\prettye:n {⟨token list⟩}`

Print the token list, similar to `\pretty:n`, but is fully expandable.

`\prettye:w` ⋆

`\prettye:w ⟨tokens⟩ \prettystop`

Print the tokens until `\prettystop` is seen. Useful for inspecting the content of the input stream.

Note that the input stream will be tokenized and has catcode frozen. Use with care.

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[*]This file describes version v0.0.1, last revised 2022/07/08.

1.3 Lua programming interface

`\prettyinit:` must also be called before calling the functions in this section.

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prettyprint   `prettyprint(⟨content⟩)`

Print the content, which should be a table of token objects.

For convenience, you can pass multiple arguments. Strings are also supported.

1.4 View result

The result is printed to a HTML file named `pretty-`⟨*jobname*⟩`.html` by default. Open the file in any browser to view the result.

Note that the HTML file will not be touched if nothing is printed, as such it's encouraged to add a line such as `\pretty:n {start}` right after loading the file.

Why HTML file?

- If the TeX program stops with error / has some error that corrupts the PDF output, the output will even with corrupted more by the debug print.

- Printing to the console is extremely limited (difficult syntax highlighting/scrolling/line wrapping), and most likely cluttered with the traceback/other TeX default output.

  (nevertheless, there might be plan to support output to console with syntax highlighting later.)

- Output to another TeX file to be compiled works as well; however it's necessary to run another instance of `latexmk` (or other tool used to compile TeX code) and compiling TeX file takes longer than loading a HTML file.

By default, the output refreshes whenever the TeX file is recompiled. The behavior can be customized with `\prettyrefreshstrategy` and `\prettyrefreshduration`.

1.5 Additional functions

There are also these functions, for convenience.

`\pretty:nn`   `\pretty:nn {⟨token list⟩} {⟨token list⟩}`
`\pretty:nnn`   `\pretty:nnn {⟨token list⟩} {⟨token list⟩} {⟨token list⟩}`

Print multiple token lists. Its effect is similar to multiple consecutive calls to `\pretty:n`.

`\prettye:nn` ⋆   `\prettye:nn {⟨token list⟩} {⟨token list⟩}`
`\prettye:nnn` ⋆   `\prettye:nnn {⟨token list⟩} {⟨token list⟩} {⟨token list⟩}`

Similar to multiple consecutive calls to `\prettye:n`.

`\prettye:nw` ⋆   `\prettye:nw {⟨token list⟩} ⟨tokens⟩ \prettystop`
`\prettye:nnw` ⋆   `\prettye:nnw {⟨token list⟩} {⟨token list⟩} ⟨tokens⟩ \prettystop`

Similar to call(s) to `\prettye:n` followed by a call to `\prettye:w`.

\pretty:w	\pretty:w ⟨*token list*⟩ \prettystop

Print the content of ⟨*token list*⟩.

Same restriction applies – the catcode is frozen.

In addition – for now, it must be brace-balanced and if ⟨*token list*⟩ has a surrounding brace group it will be removed. Use \prettye:w instead if possible.

\prettystop ⋆	\prettystop

Only used as a delimiter for :w functions. For convenience, this function is defined to do nothing.

\prettyshow:N	\prettyshow:N ⟨*token*⟩
\prettyshow:c	\prettyshow:c {⟨*control sequence name*⟩}

Show the meaning of a N-type argument.

1.6 LaTeX 2ε interface

\prettyN	\prettyN {⟨*token list*⟩}
\prettyX	\prettyX {⟨*token list*⟩}
\prettyO	\prettyO {⟨*token list*⟩}
\prettyV	\prettyV ⟨*tl var*⟩
\prettyinit	\prettyinit
\prettyshowN	\prettyshowN ⟨*token*⟩
\prettyshowC	\prettyshowC {⟨*control sequence name*⟩}

Alias of the correspondingly-named commands.

\prettyeN ⋆	\prettyeN {⟨*token list*⟩}
\prettyeW ⋆	\prettyeW ⟨*tokens*⟩ \prettystop

Alias of the correspondingly-named commands. Only available in LuaTeX.

1.7 Customization

These variables can be redefined before the first call to \pretty:n or \prettyinit: to customize the behavior.

\prettyfilename	The output file name. Defaults to pretty-⟨*jobname*⟩.html, as mentioned above.

\prettyrefreshstrategy	The auto-refresh strategy. Allowed values are 0-4. 0 is no refresh. Which value works best depends on the particular browser. On Google Chrome, passing --allow-file-access-from-files may be useful.

\prettyrefreshduration	The duration between two consecutive refresh check, in milliseconds. Defaults to 1000.

2 Implementation

Unfortunately, the implementation is not typesetted in TeX. Read the .sty file.

Index

The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.