The \texttt{l3benchmark} package
Experimental benchmarking

The \LaTeX{} Project\textsuperscript{*}

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1 Benchmark

\texttt{\textbackslash g\_benchmark\_duration\_target\_fp}

This variable (default value: 1) controls roughly for how long \texttt{benchmark:n} will repeat code to more accurately benchmark it. The actual duration of one call to \texttt{benchmark:n} typically lasts between half and twice \texttt{\textbackslash g\_benchmark\_duration\_target\_fp} seconds, unless of course running the code only once already lasts longer than this.

\texttt{\textbackslash g\_benchmark\_time\_fp}
\texttt{\textbackslash g\_benchmark\_ops\_fp}

These variables store the results of the most recently run benchmark. \texttt{\textbackslash g\_benchmark\_time\_fp} stores the time \TeX{} took in seconds, and \texttt{\textbackslash g\_benchmark\_ops\_fp} stores the estimated number of elementary operations. The latter is not set by \texttt{benchmark\_tic://benchmark\_toc:}.

\texttt{benchmark\_once:n}
\texttt{benchmark\_once\_silent:n}

\texttt{benchmark\_once\_silent:n}\{(code)\}
\texttt{benchmark\_once:n}\{(code)\}

Determines the time \texttt{\textbackslash g\_benchmark\_time\_fp} (in seconds) taken by \TeX{} to run the \texttt{(code)}, and an estimated number \texttt{\textbackslash g\_benchmark\_ops\_fp} of elementary operations. In addition, \texttt{benchmark\_once:n} prints these values to the terminal. The \texttt{(code)} is run only once so the time may be quite inaccurate for fast code.

\texttt{benchmark:n}
\texttt{benchmark\_silent:n}

\texttt{benchmark\_n}\{(code)\}

Determines the time \texttt{\textbackslash g\_benchmark\_time\_fp} (in seconds) taken by \TeX{} to run the \texttt{(code)}, and an estimated number \texttt{\textbackslash g\_benchmark\_ops\_fp} of elementary operations. In addition, \texttt{benchmark\_n} prints these values to the terminal. The \texttt{(code)} may be run many times and not within a group, thus code with side-effects may cause problems.

\texttt{benchmark\_tic:}
\texttt{benchmark\_toc:}

\texttt{benchmark\_tic: (slow code) benchmark\_toc:}

When it is not possible to run \texttt{benchmark:n} (e.g., the code is part of the execution of a package which cannot be looped) the tic/toc commands can be used instead to time between two points in the code. When executed, \texttt{benchmark\_tic:} will print a line to the terminal, and \texttt{benchmark\_toc:} will print a matching line with a time to indicate the duration between them in seconds. These commands can be nested.

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underlined point to the definition, all others indicate the places where it is used.

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